AMERICAN VETERINARY REVIEW,

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EDITORIAL.

AMERICAN VETERINARY REVIEW.—One year more has elapsed since the REVIEW was first presented to American veterinarians as a link of union, a means of communication between them, and as a friendly neutral ground for discussion and individual improvement; and now we are entering upon our eighteenth year. That age does not mean old, but a pretty robust constitution, considering what troubles had to be passed through, what obstacles had to be overcome. From a small number of about 400 pages in our junior issue, we have reached that of a volume of over 700, and from a limited edition, have arrived to one which justifies our greatest pretensions.

To our friends, our subscribers, we owe much, but to our *collaborators* our debt can never be paid—they are the life of a journal. From them comes the blood of interest which fills our pages, and to them our warmest thanks must for ever be given.

It is not our intention, however, to be satisfied with our past gains. Always watchful of the interests and the progress of the profession, we intend to maintain the position in American veterinary literature that we have achieved by careful attention to the objects of the REVIEW at its birthday. Our readers will learn with pleasure, we think, that special arrangements have been made to secure for the REVIEW original articles from some of the leading veterinarians at home and abroad, which will impose an increase in our monthly issue of eight pages, bringing our next volume to nearly 900 pages.

SIXTH INTERNATIONAL CONGRESS OF VETERINARY MEDICINE.—This important event, which was decided upon after the Congress of 1889, is to take place at Bern, in Switzerland, during the year 1895. We have received a notice from the committee of organization, a translation of which we present here to our readers. It may be thought by us Americans that this is an early step; but we cannot be judges of it, especially after our experience of last November.

The letter reads as follows:

"*To the Veterinary Colleges, Professional Societies and to all Veterinarians of Every Country.*

"GENTLEMEN AND HONORED COLLEAGUES:—At the close of the Fifth International Congress of Veterinary Medicine in 1889, it was decided that the next Congres should be held in 1894, in Switzerland, and that its organization was to be left in the hands of the Swiss members of the Fifth Congress.

"Following a report made by one of the members to the Swiss government, it has been decided that the Sixth International Veterinary Congress shall be held at Berne (Switzerland) in 1895, and the following committee was appointed: President, Colonel Potterat, chief army veterinarian; First Vice-President, Prof. H. Berdez, Director of the Veterinary School of Berne; Second Vice-President, Prof. Hirzel, President of the Swiss Veterinary Society at Zurich; Secretary, Prof. Noyer, of the school of Berne; Members, Messrs. Schindler of Glaris; Suter, of Diertal; Gillurd of Locle; Knusel of Lucorne, and Beretta of Lugano."

Following this request made by the President and Secretary of the Committee of Organization for any suggestions or propositions of general interest that can be offered, and that will assist in the organization of a programme which will help the Sixth Congress to be equal, at heart, to those of Brussels and of Paris. We will, no doubt, receive more communications in relation to this important event, and will not fail to lay them before our readers.

VETERINARY EDUCATION.—This subject has been before the professors of America for a long while; it has been talked and talked over, suggestions after suggestions have been offered, papers after papers have been read before associations; and what has been the result? As far as we can see, to this day, nothing. By a resolution of Prof. Osgood, offered at the last meeting of the U. S. V. M. Association, a Committee on Veter-

inary Colleges, is to meet in a short while. But what will be done? Is it to be expected that a few veterinarians (members of the committee) can decide upon such an important question at one or at several meetings—all by themselves? What of the opinion of the veterinary profession at large? Why has not the subject been discussed outside of meeting rooms, faculty chambers, or friendly gatherings? We have time and again said to veterinarians of this continent that our pages are at their service; the subject is of enormous importance, and their opinions are of great value. Yet, notwithstanding all these calls, we have secured but one letter in answer, and that is only a promise of a futnre discussion of the question proposed at the Chicago meeting. It is five months since; but never mind; it will come from one who is most versed on the subject, and we are sure will be very valuable. To him we say, hurry up. To others, we repeat, let us hear from you, for until you do, "changes and improvements" can scarcely be looked for.

STILL ANOTHER.—The more the merrier, it is said. Let us wait a few days to see if the proverb is always true. The *United States College of Veterinary Surgeons* is announcing its first annual catalogue for the 1st of April.

ORIGINAL ARTICLES.

TYPHOID FEVER; OR, CONTAGIOUS INFLUENZA IN THE HORSE.

BY PROF. W. L. ZUILL, M.D.D.V.S.

DEFINITION.—Typhoid fever in the horse is a disease having many forms, and is propagated by infection and contagion. The disease always has similar general symptoms, even when accompanied by diversified local lesions affecting the respiratory and digestive organs, the nerve centers and lower portions of the extremities. It always assumes an enzootic form, and isolated cases are rarely if ever observed. It is due to this fact, that every one now admits the contagious nature of this disease, Prof. Trasbot of the veterinary school at Alfort, Paris, being the first to call attention to this fact.

SYNONYMS.—One of the oldest names of this disease is taken from the Italian, and called influenza, because it was then believed that certain atmospherical conditions was the cause of its spread and its infection. This term was appropriated, and used by the Germans, and from them passed into France. Some authors have confused typhoid with carbuncular fever or anthrax, and it is not unlikely that a superficial, and hurried examination, made some time after death, upon animals which had succumbed rapidly to this disease is responsible for this opinion. As soon as the symptomatology of this disease was well defined, the term typhoid fever was given to it. This name has created a great deal of criticism, but has nevertheless been retained. Objection has been made to its use because it indicated a similarity or identity with the disease of the same name in man. It is, however, not the same disease that is ound in the human species, and is not transferable from one species to another. Typhus fever is a term that has been suggested by some writers as a name for this disease, but this would be still more objectionable, as it is a term already used to designate a contagious disease in the bovine species. Prof. Lafosse, of Toulouse, proposed to call the disease typhose, indicating a certain condition of stupefaction, or coma, but the term has not been accepted by the veterinary profession, and is seldom used. Typhohemia has also been used in this sense, to indicate a state of stupefaction of the organism due to a profound alteration of the blood, but I think I can show this to be incorrect when we come to review the pathological anatomy of the disease. Adeno catarrhal fever is a term which can only designate one of the rare forms of this condition. Bilious, hepatic, adynamic and ataxic fevers are also open to the same objections, and this is also true of such terms as epizooty, distemper, pink-eye and shipping fever; of these terms those which mean anything at all indicate only symptoms of the disease, rather than define its condition.

The term typhoid fever, although it might seem to indicate a similarity with the disease of the same name in man, yet is

the best that has been found. It will be seen that these two diseases are strangely similar in their general symptoms, most of which, from the very beginning, are almost identical; the intense fever noticed in man in the early stages of the disease is also well defined in the horse, and especially so if there be complications; this disease is also accompanied by a condition resembling drunkenness, stupefaction and debility, and probably, also, intense headache; the symptoms indicating this condition. While these symptoms are of far less importance in the horse than in man, they nevertheless show the marked resemblance between the two diseases. A large number of papers have been written upon this subject, but many of them are of little scientific value. In 1869, M. Salles presented to the Central Society of Veterinary Medicine, Paris, a competitive essay on this subject, containing much valuable and interesting information. In the year 1870, Bouley made a report on this disease, presenting some new and interesting facts, adding much to our knowledge of the subject, the symptomatology and pathological alterations being especially well studied.

ETIOLOGY.—The writings of the last twenty years tend to prove that this disease, typhoid fever, or influenza, is especially characteristic of the horse, and is confined to this species. It develops rapidly in young animals, approaching or a little past the age of full growth; it seldom occurs in old horses, and if at all is usually in a mild form. Here is another instance of the similarity of this disease to that of the human species, where the disease is chiefly seen in individuals about the age of twenty, while it is an exception in old persons and infants. It has not yet been determined that colts are not exempt from this disease, for the reason that they are seldom if ever confined in stables containing a large number of horses, and are away from the centers of infection, but it is not uncommon to find it in horses of from three to three and a half years old. Age, therefore, seems to be a predisposing cause, and when enforced idleness is added to this, the predisposition is greatly increased. M. Benjamin even goes so far as to deny the contagiousness of this

disease, even when he saw that when once introduced into a stable it spread rapidly, and almost exclusively, among young animals recently brought in, even when they were scattered among older ones. Overfeeding is also considered as a predisposing cause, from the fact that the disease may be seen in its worst form in overfed sale horses; while in underfed horses it assumes a relatively mild form. Some years ago, when typhoid fever was supposed to exist only in sporadic cases, it was quite satisfactorily explained by the over-exertion theory, especially as the products of tissue waste are found in the blood in generally increased proportion, represented by urea, creatin, creatine, etc.; but these causes are predisposing, not determining. This disease was never considered to be contagious in character until 1872, when Prof. Trasbot, director of the veterinary school at Alfort, expressed this opinion to the Central Society of Veterinary Medicine, which was rather severely criticised. M. Benjamin wrote an article on this subject, intended to demonstrate an opposite view, but the evidence produced was not of sufficient value to prove the correctness of the statement. During the spring of 1893, I was most forcibly impressed with the contagiousness of this disease, as I saw over forty cases in one of the large brewery stables in Philadelphia; the disease was brought in by the purchase of some fresh Canadian horses in April; these animals infected nearly 40 per cent. of the stable, and every animal affected was under eight years old.

Two other instances occurring at the same time, one in the stables of a well-known circus proprietor, who lost over 50 per cent. of his stock from this disease, the number of animals kept in the stable was about 75; the other instance was of a carter, who was almost ruined by the ravages of this disease, losing nearly three-fourths of his animals.

INOCULATION.—The contagious character of typhoid fever is now a well recognized fact, but up to the present time it has been a question as to whether or not typhoid fever was inoculable. Experiments made with the disease, to prove its transmission by inoculation, have by no means given satisfactory

results. The experiments have been made by inoculating blood taken at the beginning of the disease, but the results up to the present time are not such as would enable us to say that the disease can be transmitted in this way.

SYMPTOMS.—The disease becomes manifest after a period of from 4 to 7 days, is the opinion of Friedberger and Frohner, but this is a question I have not been able to determine positively from clinical observation, as I have found animals very sick in the morning that were in apparently perfect health the night before. The symptoms vary, however, according to the localization of the disease. Typhoid fever may run a very rapid course, one case occurring in my practice when the animal died within eighteen hours after the first clinical manifestation of the disease. In this case there was a rapid cerebral localization, which had a fatal termination before professional aid could be obtained, and in which was manifest an intense excitement and total paralysis.

Often there is localization upon special organs, followed by a rapid change which may speedily have a fatal termination; or, on the other hand, the change is a gradual one, accompanied either by a pleurisy, enteritis, pneumonia, pleuro-pneumonia, congestion of the spinal cord, anasarca, congestion of the podophyllous tissue, iritis, nephritis, hepatitis, cerebritis, and even complications of the heart and its envelopes, all of which complications I have more than once seen in my own clientage.

It is by no means uncommon to find a localization upon two or more organs simultaneously or successively.

When the disease is rapid in its evolution death speedily intervenes if proper care is not immediately given. Animals will pass from perfect health into profound stupefaction and coma in a few hours. They stand motionless in the stall, head down, ears drooping, and eyelids closed; they appear to have lost all tangible sensibility, and from the very beginning there is hyperaemia of the brain and cord. At intervals localized muscular tumors are seen in the region of chest, shoulders and thighs; they will stagger and reel from side to side, like a

drunken man, and almost fall while walking, owing to a loss of muscular coördination; this is the earliest manifestation of an interference with the functional activity of the cord; at the same time the general symptoms of the disease may be noticed. The conjunctival mucous membrane is almost tinged a greenish yellow, intermixed with a dull dark red, the yellowish tinge indicatlng a liver complication. The mucous membrane of the mouth is of a dark dull color, having a pasty, sticky feel, the tongue covered with a yellowish brown pus. The action of the heart is strong, tumultuous in character. and increased to 80 or 90 strokes per minute. The pulse is soft, weak and almost imperceptible, the respiration increased to 25 or 30 per minute, the lungs normal. The temperature rises quickly, and at the rectum registers 106° to 108° F. If blood is drawn in the early stage of the disease, it is often slobberish, but examinations show that it has all its physiological properties, it is dark when first drawn, but soon regains its color on exposure to the air. Coagulation is rapid, reqniring but 5 or 6 minutes instead of 10 or 15 normally; the result is a clot with very little buffy coat. This precludes the idea ot an alteration in the blood, rather indicating inflammatory changes. Vertigo and coma soon appear, interrupted from time to time by periods of excitement, symptoms of paralysis soon follow, and the animal falls to the ground, to be followed rapidly by death from asphyxia. These cases of rapid death may be seen in young, green plethoric horses, but no anthracoid changes can be found in the blood of these animals.

ORDINARY COURSE.—As a rule the disease follows a much slower course when the localization is upon some of the abdominal or thoracic organ; most frequent upon the digestive tract. Pneumonia and pleurisy are quite frequently seen; but complications of the spinal cord, with or without œdema of the extremities, is seldom noticed. It is almost certain that the disease will terminate favorably with any of these complications, especially after the first twelve or fourteen days. A very high fever is a marked symptom of the disease from the beginning,

and strikes one as being out of all proportion to the other symptoms. In influenza or typhoid fever the febrile symptoms decrease as the local manifestation becomes developed. A complete loss of appetite is one of the earliest symptoms, the patient refusing all kinds of food, but fresh cool drinks will be readily taken at any time, which can be taken advantage of for the adminstration of food. These animals are dull and sleepy, the head hangs in the manger, and facial expression is entirely wanting; there is a general constitutional depression, with an unsteady drunken gait.

The respirations are increased to 20 or 25 per minute, and the pulse to 70 or 80, while the action of the heart is extremely exaggerated. The temperature ranges quite high, with a marked coloration of the conjunctival and bucal mucous membrane. The eyelids are sometimes swollen and blinking, *with tears overflowing upon the cheeks (a pathonomonic symptom).* These symptoms are soon followed by chills, and muscular tremors of the shoulders and thighs; when covered with a blanket the skin soon becomes warm and moist; at this stage of the disease no localization can be determined.

The blood contains quite a large proportion of fibrin, or plasma. Messrs. Gréhaut and Trasbot have found as much as 7 grains to the litre instead of 3 to 3½, the normal quantity. They find that the defibrinated blood, when exposed to air, will again coagulate, and that about 1 gram of fibrin may be again extracted from it. M. Gréhaut has ascertained that a large percentage of urea, creatine and creatinine is also present in the blood, and that the microscope shows nothing in the shape of foreign elements; the red corpuscles are intact, have not undergone changes or modifications; they agglutinate, and appear a little more sticky; there is an increase of white corpuscles, which is not specific, as similar modifications can be found In all inflammatory diseases. Other changes mentioned by some writers are merely post-mortem, and have tended to propagate errors concerning the disease.

LOCALIZATION UPON THE INTESTINES.—This is the usual

localization after the disease has reached a certain stage, and is sometimes manifested by constipation. The mouth is dry, the tongue clammy, no appetite, the dung small, dry and covered with varnish, but there are seldom false membranes on its surface. Often there are dull colicky pains, the animal continually pawing the ground; will lie down, rise up again, and appear to be greatly agitated. A violet-colored tint of the buccal mucous membrane is noticed, and by close examination a purple line is observed along the border of the gums, which is another pathonomonic symptom of the disease.

Occasionally an abundant serous diarrhœa comes on. The patients manifest an intense thirst, and rapidly loses flesh. If the fever continues, the patient will die in ten or twelve days. If, however, the diarrhœa can be controlled, the appetite will return together with other evidences of health. The alarming phenomena having disappeared, the patient recovers quickly, but for a long time will remain thin, poor, and incapable of doing his ordinary work. During the course of the disease, there is sometimes a serous œdematous infiltration into the dependent parts of the belly and legs; if mustard plasters have been applied to those parts, it is difficult to differentiate the character of the infiltration. This form of localization upon the digestive organs is the least serious, as the enteritis is usually of a mild character, and terminates in recovery.

Should the diarrhœa continue for any great length of time, very marked prostration will result, the patients can not be kept on their feet; they fall to the litter, and inflict upon themselves contusions and other injuries, which are very prone to terminate in putrid infection.

LOCALIZATION UPON THE RESPIRATORY ORGANS.—Pneumonia and enteritis often appear at the same time, and in such a complication it is clearly shown that we do not have to deal with a simple inflammation like that of an uncomplicated pneumonia, for then one disease would act as a revulsion to the other. It is not uncommon to find this condition complicated pleuritic involvement. The respirations become very much

accelerated, varying from 25 to 30 per minute. For two or three days the characteristic symptoms of pulmonary diseases are not noticed, the rusty discharges being almost always wanting. As a rule, the pneumonia begins low down, near the leg bronchus, and spreads from there slowly to the periphery. Normal sounds are heard on ausculation; percussion reveals a slight dullness in the middle, and lower part of the lung, whilst the resonance is retained in the anterior, posterior and superior parts. In the majority of cases, however, the dullness is not thus accurately limited and defined between fixed lines. A tubular breathing is not infrequently heard to the end of the disease, for the obstructed zones are surrounded by tissues permeable to air. In a certain number of cases the chest wall is not sensitive to percussion, while in others a very exaggerated sensitiveness is manifest, demonstrating the presence of a pleuro-pneumonia. *There are times, however, when the pleuritic complications will exist without any noticeable sensibility of the chest wall due to the marked depression of the nervous system with corresponding slight reaction.*

These symptoms, taken in their entirety, are slightly modified from what they usually are. This localization is serious, for it produces the greatest mortality. Some sudden complication ending in asphyxia is always possible. At a given moment the animal appears to grow better, but the next day pulmonary congestion may supervene, and death follow by asphyxia. Even without this complication of congestion, the pneumonia has a tendency to terminate in gangrene, the lungs grow tender in spots, the red mucous membrane now changes to violet color, the temperature rises suddenly to 107 3-5 F. (42 c.), and even more; there is a greyish clotted fetid discharge, always accompanied by rumblings in the bowels, and bronchial rales. Pleurisy may manifest itself at the outset, or follow later as a complication of the pneumonia. In this last condition death often comes on in the following manner: Pleurisy at first comes on slowly, suddenly there is an aggravation of the symptoms, and the animals die of asphyxia, either in conseqence of the

very abundant transudation into the sac of the pleura, or by a spasm of the lungs complicating the pleuritics transudates. At other times the complication is very mild, and there is simply a catharrhal affection of the anterior portion of the respiratory tract, a bronchitis or a laryngitis. In this case the cough is thick, the discharges purulent, and accompanied by a serous infiltration into the inter-maxilary space, but which rarely run on to suppuration. Convalescence goes on regularly, and after five or six days the discharges become thicker and disappear. This form of disease is especially seen in old animals, and is accompanied with but little tebrile disturbance.

LOCALIZATION UPON THE SPINAL CORD.—In the course of the disease, even with complications of enteritis, pleurisy and pnenmonia, the animal is often struck with paralysis, falls to the ground and soon dies. In rare cases the congestion is arrested at the lumbar plexus. M. Trasbot has noticed but a single case in a horse presenting symptoms of enteritis, pneumonia and pleurisy. This patient remained paralyzed in the hind quarters for 24 hours, and there was a total suppression of sensibility and motion.

LOCALIZATION UPON THE FEET.—Founder is a very rare complication, but remarkable instances have been cited of this localization coming on 12 or 24 hours after the appearance of the first symptoms. It is impossible to move the fouudered animal, there is extreme sensibility, and great heat of the hoof, walking is impossible, the animal supporting his weight upon his heels. Added to this an intense fever superinduced by the sufferings of the animal.

ANASARCA.—Anasarca is frequently a complication, not at all influenced by the localization of the disease. These infiltrations which are usually noticed, increase, and there are produced lesions much resembling those of purpura-haemorrhagica. As in this disease the infiltration of the connective tissue of the extremities may so distend the skin as to produce fissures at the folds of the articulations. This complication usually occurs with very young animals from 3 to 4 years old. A moderate infiltration

of the dependent parts is a favorable symptom, and should not be confounded with purpura-haemorrhagica.

OTHER COMPLICATIONS.—It occasionally happens that other irregular complications supervene to cause the death of the animal, one instance brought to my notice by a consultation, in which there was an intense nephritis, with an enormous hyper-secretion of urine, the animal having recovered from all other evidences of the disease but this, which could not be controlled, and which terminated fatally in a few weeks. Another instance in my own practice, when the animal entirely recovered. with the exception of a small, weak, rapid, intermittent pulse, which could not be influenced by drugs, and which terminated in death a few weeks after apparent convalescence. Haemorrhagie Iritis is not unfrequent after complication of this disease, but which usually yields readily to ordinary treatment. the reabsorption requiring from two to three weeks. Plastic iritis is occasionally seen in this disease after an apparently complete convalescence. These complications develop rapidly, and an animal which in the evening was, to all intents and purposes, perfectly sound, is found in the morning entirely sightless.

(To be Continued.)

MEAT INSPECTION.

THE IMPORTANCE OF GENERALIZATION AND UNIFORM REGULATIONS FOR THE INSPECTION OF MEAT IN ALL COUNTRIES.

BY MR. CHAS. MOROT, Municipal Veterinarian, Troyes, France.

"Les meilleures institutions sont soumises a des lenteurs et á des mènagements, parce que le bien n'est jamais aussi prompt, aussi aisé que le mal."

(Mereier—Tableaux de Paris, Vol. 1, page 131, Amsterdam, 1782.)*

The first American Veterinary Congress has included in its programme the question of the sanitary inspection of food of

* The best institutions are subject to delays and obstructions in their progress, because doing good is never so easy and quick a process as doing evil.

animal origin, imitating in this its European predecessors of 1869 (Zurich), and 1889 (Paris). There is a proof in this that in young America, as well as in old Europe, this important subject of public hygiene is not considered in a narrow or local spirit, or from the exclusive point of view of a single locality or region, without reference to the policy or the interests in the matter of other regions or communities. Each nation will of course be influenced by its own specific and charaeteristic traditions, and its special personalities; but, as said M. Millerand, it is not any longer possible for them to continue to be shut in by their own boundary lines without giving due weight to the customs, opinions, and laws of their neighbors. An absolute necessity, in my opinion, lies upon each country to occupy itself with the foreign regulations of the trade in alimentary substances.

These regulations must be studied in full, and minutely compared, in order to make them a basis for reciprocal exchanges and advantageous modifications. They must thus amalgamate together, and to a certain extent become identical, in order to become at least uniform in their general outlines.

The examinations at home of these regulations, will also be very advantageous. From an economic and hygienic point of view, a country would derive much benefit from sending delegates occasionally to others, to learn by ocular observation the abattoirs, slaughter-houses, markets, etc., with their methods, and to investigate the condition of the various organs of the animals treated by them, with the appliances in use and modes of working of these establishments, and their methods of inspection, including the nature of the meat condemned, and the sale of some specified meats, etc., etc. Such studies by these delegates would constitute very instructive object lessons of facts, while there are in existence so many practices in common application in one country which are considered impracticable, and repudiated in another, for the simple reason that they are unknown or have never been understood. These international methods of improving the commercial and sanitary police of

human food seem to me to be the only ones by which the existing diversities and inconsistencies and more or less exaggerated and prejudiced modes of action can be brought to an end. I can see no way more likely to definitely abolish existing confusions and collisions of mutual interests, whether originating in indifference, or ignorance, or in improper complications.

The flesh of domestic animals being by far the most important food of animal origin, it necessarily follows that the attention of hygienists of various epochs has always been specially directed to its quality and modes of preparation and use.

Among the more civilized ancient nations, the sanitary police of food was first placed under the surveillance of the religious orders, as we see it at the present time amongst the Jews and the modern Musselmen. Thus, Moses, St. Paul, Mahomet, St. Theodore of Canterbury, and others, in their religious regulations, treated of the salubrity of food as well as upon ethical principles. Subsequently, as the times progressed in knowledge, side by side with the religious or sacred ordinances came the study of civil or laic alimentary hygiene. This state of things underwent a marvelous development toward the middle ages, in most of the countries of Europe, notably in France, Belgium, Italy, Germany, etc., and to a great number of localities, and large and small towns of various importance, local administrations, township, incorporated authorities, and trade corporations, stringent hygienic ordinances were adopted and more or less strictly enforced.

Augustin Thierry describes with admiration the efforts of France in the middle ages in favor of hygiene and publie salubrity. He does not forget to state that as early as in the thirteenth century there was a common abattoir at Amiens, and he does not hesitate to say that the study of the measures taken by our ancestors for the corporal welfare of the people contain an important amount of most instructive information for even the scientists of to-day.*

*A. Thierry—Essai sur l'histoire du Tiers—Etat, Edition in 12, Paris, 1868, pp. 465 to 467.

The revolution of 1789 brought with the suppression of the corporations into France, the abolition of the old regulations suggested by experience to prevent the abuses of the butcher trade. From this date, as affirmed by the celebrated hygienist Foderé, in 1813,* butchers no longer obeyed the regulations, and knew no others aside from their own will; they opened slaughter-houses all over, and being no longer watched, ignored, especially in small towns, all rules of salubrity; hence the necessity of renewing the above regulations by force, and of re-establishing the functions of inspector of butcheries, a function which in fact is in large cities entrusted to police agents, but which is left entirely to the direction of the butchers in towns of the third and fourth order, to the great detriment of the citizens. In 1885, Delachenal regretted, as had Foderé, the disappearance of the police measures of the middle ages in relation to butcherics and bakeries. He said: "Some of those old regulations ought to be re-enforced, since, through the neglect of their enforcement, the old abuses which they were intended to remedy have been been able more vigorously to resist the influence of time.†

It is to be deplored that in our progressive epoch we are at times compelled to look back regretfully upon the hygiene of the old times, instead of being able to recognize all around us no only the continued existence of the former sanitary food police, but also its adaptation to the exigencies of modern science, the existing customs, and the territorial and political organizations of the various countries.

Owing to the almost complete absence during the middle ages of scientific data upon the pathology of animals used for food, it is easy to understand why the inspection of meat was entrusted exclusively to persons familiar only with abattoir work, or to mere police employees. But that which is less easily understood is that in some countries, especially in France,

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*Dr, Foderé—Traité de Medecine Légale, Vol. vi., Paris, 1813, p. 291.

†Bulletin de l'Academié, Delphinale, Vol. xx., 1885, Grenoble, 1886, p. 300.

more than a century after the foundation of the schools by Bourgelat, veterinarians have ever been, except on some occasions, and almost by accident, called upon to serve as meat inspectors. Then, when an inspection was required, it was generally left to the customs officers, supervisors of slaughter-houses, butchers, and the like. Within a period of less than thirty years, Paris did not count a single veterinarian on the inspecting staff; and Lyons, the second city of France, was in the same condition. It was only within a few years that in France the functions of its inspectors has been entrusted to veterinarians. And still, though the larger cities may have veterinarian meat inspectors, many of the smaller cities have none, and the case is still worse with the smaller towns. Belgium, Luxemburg, Spain, Italy, Switzerland, Russia and Germany have inspectors in the large cities, and some are found in Roumania, Russia, Bulgaria, Portugal and Holland. In Great Britain there are a few. In Greece, Athens is the only place where they exist.

The work of meat inspectors rests ordinarily upon official regulatious. These are governmental, provincial, departmental or communal, or such as are applicable to the various localities from which they are paid. The governmental jurisdiction, as in Bulgaria, applies to the entire country; it may connect with other bodies, as in Belgium, Spain, Italy, Roumania, Luxemburg, Switzerland and some German states. Russia exercises a governmental supervision, while Portugal and Great Britain have only sectional (communal) regulations.

Communal regulations are the least satisfactory in their results, as in many instances they are only partially enforced for lack of the prestige of the supreme central power. Provincial and departmental regulations have the advantage of originating in a somewhat higher source, which guarantees a somewhat better enforcement, but yet are not without objections. On the other hand, a wise governmental law seems to realize all the necessary conditions for a perfect meat inspection, by reason of its being better generalized, more uniform,

aud springing from the highest authority. It must be enforced by veterinarrans only, or in their absence, by special agents under general veterinarian jurisdiction.

Each community must provide for the execution of the requirements indicated, and it is essential that the Government shall have a specified list of the principal conditions which justify the condemnation of the meat, although a certain amount of discretion is allowed to the veterinarian in the formation of his judgment. Similar schedules of diseased conditions are required by the laws of Belgium, Italy, Roumania and Switzerland;* and in some parts of Austria, Bavaria, France and Portugal.

In the majority of the European nations, where the inspection of meats is neglected, an important movement is now in process of organization, having in view of a governmental supervision, under obligatory laws, of a co-operative character, and in other of the States already having a system of police, though not well organized, action is to be taken to effect an inprovement in their present code. In Roumania the veterinarians have obtained a general law on the subject by demonstrating to the proper authorities its necessity and importance. Italian and Belgium veterinarians, through the efforts of their societies, and as one of the fruits of the Congresses of Bruselles (1880) Bologna (1879) and Milan (1881), have accomplished the same result. It may be presumed that the veterinarians of Germany and Austria will co-operate in a movement in the same direction, through the influence of the Congresses of Cassel (1876), Nuremberg (1891), and Vienna (1892). French veterinarians have worked hard in the Congresses of Paris (1878, 1885, 1889) and through their societies, and they are hoping to see the realization of their expectations at an early period.

*The list of meats unfit for human consumption was not overlooked in the proposal of Governmental regulations offered at the Veterinary Congresses of Milan (1881), Vienna (1892), and those of Bulgaria and Germany. It has also been considered by the veterinarians of the Aube Society and that of the Grand Conseil des Veterinaires in 1892.

I hope that the *International Veterinary Congress of America* of 1893, following the example of predecessors, will issue a forcible and effectual appeal in favor of a system of meat inspection *of which generalization, obligation and uniformity* shall be the essential features, to be carried into effect through members of the veterinary profession under the prestige and sanction of governmental authority and regulation. If our colleagues on the other side of the Atlantic will but follow the road to success which has thus been already traced by their European brethren, they can hardly fail to obtain the desired regulations, greatly to the benefit of the interests of the public hygiene, and the more extended utilization of their professional influence and qualification. Should they succeed they will have worked well, not alone for their own eountry, but in rendering the aid of their good example to those who are still clinging to prejudices and errors of the old system—which was not a spstem, and the old doing—which was not doing, but rather the leaving undone that which is so well worth doing in the best manner possible.

A VARIETY OF PRACTICAL CASES.

By J. D. Fair, D.V.S., Berlin, Ohio.

A Paper read before the Ohio State Veterinary Medical Association, Jan. 10, 1894.

When our worthy president requested me to prepare a paper for our annual meeting I consented to do it without giving it a second thought; I soon commenced to think, what will I select for my subject: Azoturia? No. Parturient apoplexy? No. Have you anything new? No. Do you know anything new? No. I finally concluded to write on a subject—or rather report, a few cases which came under my observation during the past summer, not expecting you to gain any great amount of knowledge from the paper itself, but I merely wish to open the way for discussion and reporting of similar cases.

What are we going to say to an owner and how are we going to treat them?

When we are called to see a patient we are expected to make a diagnosis, or, at least, give our opinion. When we are not able to make a positive diagnosis, our opinion to the owner should not be very elaborate; but give it as few words as possible. There is such a thing as not saying enough, but the probabilities are we say too much. Where to draw this line we must determine by our judgment of human nature. In obscure cases, cases that assume a contagious or infectious character, or where we are asked to give a final opinion, I think we should be guarded in that opinion, and, if possible, call counsel. In many cases we lose credit, we divide honors, but censure will be just the same. I am frequently called to see cases of fractures. Fractures of the bones of the extremities have proven very unsatisfactory to me in my practice. In cattle I have had good success. The point I wish you to discuss is! Is it advisable to treat simple fractures of the bones of the extremities when occurring in good or ordinary horses? What are you going to advise the owner?

Not very long ago I was called to see a Short-horn registered cow. The history of the case was as follows: The cow was placed in the stall in the evening on a ground floor and left as usual. In the morning when the owner found her she was down in the stall in the usual sitting position, and not able to get up. He made several attempts to get her up but failed. I was called to see her, and we got her out of the stall, and, with the help of a dog, we tried to get her up, but she could not stand. I soon discovered that the trouble was limited to the right hind leg. She could flex and extend the leg, no shortness, no external prominence, no crook nor angle. I moved the leg and could not detect any crepitation. I made an examination per rectum and per vagina. I thought everything was normal. Now what are you going to say to the owner? I made a guess—Dislocation of the coxo-femoral articulation—and explained what that meant, and the owner said: "What can you do for her?" I answered, "Nothing." "Then destroy her, and we will see whether you are right." The owner and

several good men present, a valuable cow, having very heavy quarters; looked well, ate well, first visit, and considering that cows are very stubborn when assisting them in getting up, taking everything into consideration, I felt somewhat embarrassed. We killed her and made a post-mortem. I immediately cut down for the articulation, and found a rupture of the coxo-femoral ligament and a dislocation. The head of the femur slipped under the anterior border of the ilium, and this accounted for no shortness nor the usual external prominence. We have had cases of dislocation before, but were in cows in ordinary flesh, and could make a diagnosis by external appearance and sense of touch. Simple fractures of the bones of the extremities in cows always adjust, and have good results.

Fractures in the horse, especially if compound, I don't pretend to treat, and think it of no avail; and to destroy them the proper thing to do. In fact, single fractures have not been very successful in my practice. A single fracture of the bones of the pelvis, if there is no particular displacement, make fair recoveries. I treat fractures in the usual way, place them in slings, correct the displacement, apply a bandage, cut pieces of paste-board and soak them in water, apply over the bandage, next another bandage, next splints, starch bandage, plaster of Paris bandage, etc. But the majority do no good again we say. What is the proper thing to say to the owner?

We will now relate to you two very similar cases which came under my observation during the past summer.

Case No. 1 was a gray mare, 14 years old, 15 hands high, weighing about 1,100 pounds, a good family mare, belonging to an old lady. This mare was really worshipped by her owner and her daughters. and was considered a member of the family.

The history of the case was as follows: She was used nearly every day in the buggy, and one day when driven by one of the daughters, she noticed an unsteady gait, but made her drive. The next morning I was called to see her, and not being at home, my student answered the call, who considered the trouble a light attack of azoturia. I saw her the next morning, and

made an examination, and, from the history and symptoms, concluded that she was not suffering with azoturia, but had some spinal trouble. Pressure of some kind, degeneration, scirrhosis, some disease of the spinal cord, the exact nature of which I did not know. Temperature and pulse normal, good appetite, urine a little scanty, high colored, containing lots of sediment and a little flakey; a chemical test showed no albumen nor sugar. I made an examination per rectum and vagina, thought she might have an aneurism of the posterior aorta or melanotic deposit pressing on the sacro-lumbar flexus, or a suppurative kidney; but, as far as I could feel, everything seemed normal, except that the left iliac artery did not pulsate as strongly as the right, and the left extremity was a little œdematous. We noticed small melanotic deposits around the anus and vulvæ, but from my examination I could not make a positive diagnosis. I had an opinion of the case, but what are you going to say to the family? They were very anxious to know whether Flora would get well again, and how soon. In this case I advised treatment, and thought that there were some chances of recovery. I gave her a mild cathartic, diuretics, and placed her in slings. After the cathartic had operated, I placed her under strychnia and iodide of potash.

This treatment was continned for two months, gradually increasing the strychina until their physiological actions were observed. At the end of two month's treatment, there was very little improvement. The treatment was then discontinued for one week, and by that time she had lost all control of her posterior extremities. I then advised the old lady to have her destroyed. This was done, and a post-mortem made. On removing the anterior extremity and exposing the viscera, I found a number of melanotic tumors, none of them causing any particular trouble. The kidneys, liver and spleen seemed all right; no pressure on the sacro-lumbar flexus. In the left iliac I found a melanotic deposit that partly cut off the circulation; this accounted for the limited pulsation and the œdema of the leg. I made sections of the spinal column and anterior to the sacro-

lumbar flexus, at the articulation I found an excavation: a hole in the spinal canal, and there was an extensive melanotic deposit extending all around the cord, passing on it and producing the paralysis.

Case No. 2 was a gray mare, eight years old, 16½ hands high, weighing about 1,700 pounds, a well-bred Norman, and in foal. She was owned by a well-to-do farmer, who gave us the history as follows: The mare was all right a few days before; he had driven and worked her, and she seemed to be all right; but the day before when he led her to water, he noticed that she staggered, not only behind, but in front as well. She eats well, drinks well, laid down, but it was difficult for her to get up. I made an examination; found temperature and pulse normal; no soreness in the regions of the loins; examination per rectum and vagina revealed everything normal; a few melanotic tumors on vulva and anus. The mare had good horse sense, but had lost control of the locomotory apparatus.

I related several cases to the owner, which had occurred in my practice. She was a good mare, and he requested me to treat her. I prescribed same treatment as in Case No. 1. Continuing this treatment for one week, when I noticed she could hardly stand, so put her out of slings for one day and then raised her again; but she seemed relaxed and not able to stand. I advised owner to destroy her, and on post-mortem found the same condition as in Case No. 1, only the deposit was in the cervical region, anterior to the brachial plexus, producing paralysis of the anterior extremities as well as the posterior.

Gentlemen, I have had two other cases, gray mares showing the same symptoms; unsteady gait; no constitutional disturbance; required the use of slings, and those two cases made good recoveries, and in a short time a month to six weeks. Those cases have been misleading to me; sudden in attack, not coming on gradually, and the symptoms accordingly. What are you going to say to the owner, and how are you going to treat them?

I will report two similar cases that occurred in my practice

during the past summer. Two extensive farmers, neighbors, having good barns and keeping quite a number of horses, they had a siege of sickness among them which assumed a contagious form. Those cases gave me a great deal of trouble, not thinking them to be contagious myself, but the owners and the community in general did. Mr. B. called at my office and requested me to come to his place to see a gray colt, one year old, that was down and not able to get up. The colt was in a large roomy stall, had gotten down during the night, was laying flat on its side, and apparently not able to raise its head. Temperature 103°; pulse 72; thin in flesh, and lousy. We turned the colt, put slings under it, and raised it, applying smart friction to its body and legs until it was able to stand; took some water and grains. I noticed some difficulty in deglutition, but thought it a case of general debility and a little sore throat; prescribed for the colt, and left it to see it again the next morning. When called the next morning I found another one down, and the owner called my attention to several others that seemed to have sore throat. At this visit I concluded I had something more serious to deal with than sore throat, and made a more thorough examination and concluded I had a stable full of cerebro-spinal meningitis. This man had a silœ in his barn and was feeding ensilage to all his stock. This was in May and we had lots of rain at that time: some of the stock would eat the ensilage while others would not, and it would lay in the mangers and would get sour and very offensive. I gave my opinion of the trouble, and advised the man to change his feed and horses. He was very slow in doing it. A fine roan mare, belonging to another man, took the disease and was treated by a quack, who thought the trouble very simple, only an inflammation of the lining membranes of the œsophagus, and said he had lots of them, and they all got well.

The owner of the roan mare consulted me about the trouble, and I told him his good mare was very sick and was going to die. She could get up by assisting her, but had complete paralysis of the pharynx. She died. I suggested to the owners

that we call counsel and dispense with the quack. We called my friend Dr. Derr. We consulted, agree on the diagnosis and cause; made out a course of treatment, and three out of eight cases died, while five made good recoveries.

We had the barn thoroughly cleaned—disinfected, fumigated, etc., then placed the sick in good clean stalls, supported them with slings, placed them on a laxative diet, prescribed for all the horses hyposulphide of soda in their drinking water, cold applications to the heads of the sick, and the following prescriptions were used in general, modified and given at such intervals as the cases demanded: Potassii Bromide. Ext. Ergot, Fluidi. Ext. Belladonæ or Spiritus Ammonii Aromatici. Spiritus Ætheris Nitrosi. Strychina Sulphatis. Spiritus Vinii Rectificate.

Strong stimulating liniment to their backs, well rubbed. After the acute stage passed, we put them on potassium iodide and strychinia.

Those cases that had complete paralysis of the pharynx we medicated and fed per rectum, and some hypodermically; they all died. Those that had partial paralysis could take nourishment, get up with the use of the slings; made good recoveries, and two of them of them were sold to dealers this winter.

On December 3d, I was called to Mr. M's, a neighbor to the gentleman where we had the cases of cerebro-spinal meningitis, to see a gray gelding, rolling and tumbling with intestinal pain. This man had a lot of horses, all stabled in a splendid barn, clean and well ventilated. The horses were having a light attack of influenza or distemper. I examined the gray gelding; found an elevation of temperature, pulse high and weak; noticed some swelling of the legs and sheath, but gave this no particular consideration. The patient seemed very uneasy, would lie down, walk around the stall, and I concluded I had a case of enteritis, and expressed myself so to the owner. The owner took me to another stable and showed me three others, saying that their legs and bellies commenced to swell the day before. I saw the characteristic swelling; dilated their nostrils; went back to the other stable, looked at one that was rolling, and

found that I had four cases of purpura hæmorrhagica, and so informed the owner. This frightened him; said he never heard of such a disease, and it must be contagious. I could not make him believe differently. They were four good confirmed cases of purpura, some of them smelled terribly, and on the third visit the owner showed me another case. This made the owner feel more confident than ever that the disease was a new one, and certainly contagious.

What are you going to say to the owner? What are you going to do for them?

I said nothing; went on and gave them the following treatment:

I placed those horses in good box-stalls, gave them plenty of air and kept everything clean. The one that was rolling and suffering great pain, I gave a hypodermic of sulphate of morphia and plenty of turpentine emulsion, alternated with Ext. Ergot. Fludi. Ext. Digitalis and Tinct. Opii.

By morning the swelling was limited to the legs, head and sheath, and was resting easy. I started the others with a four-drachm alœtic pill, and during the past two years have adopted the following treatment: Chlorate of potash in their drinking water, emulsion of turpentine if necessary, and the following preparation given every six hours: Ferri Sulphatis. Aqua Dist. Sulphate Strychnia and Sulphate Quinine.

This makes a very nice solution, and I think if we consider the pathology of the disease, this combination meets the indications as well as any preparation we can prepare. Now, gentlemen, you have heard my opinion and treatment of those diseases, and I hope and trust you will all fully express your opinions and experience. Criticise my wrong doing, so that I may learn, for where ignorance is bliss, 'tis folly to be wise.

NOTES ON THE METHOD OF SPAYING BITCHES.

By Dr. M. Francis, V.S., College Station, Texas.

In looking over the literature in English on this subject, the writer has found very little of value to guide the young or inexperienced practitioner. Before proceeding, I must stop a moment to heartily endorse Prof. Wesley Mills' remarks on the propriety and usefulness of the operation. The public, however, demand it, and so far as the writer is concerned, they shall have it. Without further remarks I shall describe a method that has given us very satisfactory results.

Requirements. — 1–Sharp convex bistoury. 1–Scissors. 1–Dressing forceps, *cnrved jaws*, scissor handles. —Dressing forceps, *straight jaws*, scissor handles. 2–curved needles, No. 6 or No. 7. Woven silk thread, No. 12 or No. 13. Several surgical sponges. Antiseptic solution. Anæsthetic mixture. Inhaler. Iodoform ointment. One assistant.

The subject should be kept on a limited diet for twenty-four hours preceding the operation. The hour for the operation having arrived, the operator washes his hands *thoroughly*, giving the nails special attention. The assistant places the animal on her side, with her back toward him, on a table of ordinary height, loosens or removes the collar if present and holds both forelegs with one hand, and both hind legs with the other hand.

The anæsthetic is given. I have tried chloroform, ether and a mixture of them. I greatly prefer the latter. I think I noticed it in Gresswell's work. It is the most satisfactory I have ever tried. It contains: Chloroform, 20 pints; Ether, 80 pints.

Having tried several inhalers we have found a conical glass percolator, such as every druggist uses, the most convenient. The quart size is suitable for ordinary animals. Large ones require the two quart size. The anæsthetic is poured on a sponge placed in the percolator, and the animals nose held inside. The thumb of the operator's left hand is placed over the neck of the percolator, and the right hand is placed on the back of the neck

of the dog, to retain the head. The percolator being of glass, allows the operator to see how matters progress inside of it. The dog usually howls and struggles considerably at first, but soon quiets down into an unconscious condition. It is probably wise before giving the anæsthetic to have the hostler give the dog a short walk out-of-doors, to give her an opportunity to empty the rectum and bladder, otherwise she is liable to do so while the anæsthetic is being given. The bitch is now hung up by the hind legs.

We have found the following method convenient: Have a door about three by six feet, place this on end, leaning from you at an angle of about ten degrees. Drive two strong nails near the top about two feet apart. Take a cord or piece of tick bandage three and a half feet long and make slip knot in each end of it. Place the legs through the loops and draw tightly around the lower portion of the tibial region. The animal is then suspended by placing the cord over the nails mentioned above. It will be readily understood that these arrangements have been made before the operation began. We have found this preferable to having the nails driven into the wall as it allows shifting to secure desired light. The operator rinces his hands in a baisen of the antiseptic solution. The instruments have been placed in a similar vessel of the solution before the operation began. We use a two per cent. solution of creoline, lysol or thyme-creysol for this purpose. Each has given satisfaction. The operation is now performed in three steps.

FIRST STEP.—Sponge the abdomen thoroughly from the pubes to the sternum with the antiseptic, throw the sponge aside. Open the abdomen with the convex bistoury in the median line, the lower end of the incision should come to the umbilicus.

SECOND STEP.—On examining the cavity the ovaries will readily be found. Secure one by the ligament, with the forceps having curved jaws, lock the handles. With the other forceps remove the organ by torsion. Repeat with the other ovary. We have never found ligatures necessary.

THIRD STEP.—Close the abdomen with two sutures of woven silk tied rather loosely with square knots. Clip the ends of the thread with the scissors. Apply iodoform ointment freely. Remove the cord and lay the animal aside to regain consciousness. We have abandoned bandages of all description. The diet should consist of sweet milk for a day or two; afterward the usual diet may be allowed. Remove the sutures about the fourth or fifth day.

REMARKS.—It will be noticed by reviewing the operation that the instruments are used but once, that is, the sponge, bistoury, forceps, needles, etc., after being used are laid aside and not returned to the antiseptic, to create confusion or the probability of infection. The abdominal muscles will be tense if the patient is heavy; the assistant overcomes this by raising the fore legs while the ovaries are being sought.

CONTRA-INDICATION.—Œstrum, pregnancy and lactation.

In one case the operation was performed under protest during œstrum, resulting in peritonitis, which proved fatal. This was the only case lost during a period of five years.

If on opening the abdomen the animal be pregnant, it is perhaps best to close the wound and postpone the operation indefinitely.

ESERINE.

BY R. P. STEDDON, V. S., Galesburg, Illinois.

A Paper read before the Eleventh Annual Meeting of the Illinois State Veterinary Medical Association.

In the very great majority of so-called bowel troubles which come to our observation, the predominating cause is torpidity of some portion of some portion of the alimentary tract or its appendages, resulting from or induced by dietetic errors, or, what is very frequent, the inability of the animal to properly masticate, or the natural propensity of bolting the food. How often we have seen animals suffering the agonies of death regurgitating gases from the stomach, the abdominal walls distended to

their full capacity, no audible intestinal sound save that of the displacement of the inflated bowel by the diaphragm in the short shallow inspiration; here we have the entire tract participating in the torpidity which assumes temporary paralysis. Again, in impaction of the various portions of the tract, in the numerous forms of indigestion, constipation and nearly all forms denominated colic, this same torpidity, mild or severe, as the case may be, is directly accountable for the lesion. In acute indigestion, especially, there is a demand for hasty action and immediate relief, otherwise the patient will succumb to its deadly effects, viz.: rupture, absorption of gases, or resulting inflammatory action; in this form of indigestion, and, in fact, in any of the disorders above mentioned, there is no agent so effectuous in restoring normal action and condition as eserine properly administered. Of the various preparations of eserine the sulphate is preferable, which should always be obtained in sealed glass tubes; in preparing a solution the mistake is almost universal of using water with the addition of boric or salicylic acid, or some allied agent with a view of preserving the drug; when water is employed in such solution, after a short time the drug begins to deteriorate, which change is ordinarily indicated by it assuming a reddish tinge, and after a few weeks its action is extremely uncertain, thus rendering it useless, and its administration, after having undergone such change, being followed by no good results. Eserine is denounced as eminently unreliable and having no right to a place in the list of curative agents—a faulty preparation of a most valuable drug—and the advocates of its use will be attacked and even abused because they dare claim any virtue for it. The best vehicle for eserine for our use is pure alcohol in the proportion of three (3) drams of alcohol to one (1) grain of eserine; thus we are insured a perfect solution and immunity from deterioration for the greatest time; the precaution should also be taken to protect it from light by colored-glass bottles, or by wrapping in dark paper. Eserine should always be given hypodermically or intratracheally when practicable, diluting the above solution with an equal amount of

water. However, in those cases of sub-acute indigestion, in impactions, constipation or any of those conditions of torpidity where the symtoms are not urgent and the constant presence of the veterinarian not required, it may be given per orem during his absence, always sufficiently diluted to prevent the alcohol from attacking the mucous membranes. The dose of eserine is from ¼ to ¾ grain. One dram of the above solution is a safe and usually effective dose for an animal of 1,000 pounds. In fifteen minutes after the administration of a full dose, there is slight uneasiness, colicky pains, loud intestinal murmurs, followed by passages of flatus and fæces; after an hour its effect gradually subsides during the succeeding two hours. It should always be used cautiously in pregnant animals, as during this period the uterus is highly sensitive and the muscular walls more susceptible to its stimulating action. The use of eserine has entirely revolutionized the treatment of these bowel affections. Those obstinate "all night" cases are now brought to a sudden and satisfactory termination in one hour, paracentesis of the colon is very seldom performed, passing the probang to relieve gastric distention is out of date, and of eserine it may truly be said, it is Nature's remedy.

SYMPTOMS AND TREATMENT OF DISEASES FOLLOWING PARTURITION.

By Dr. A, G. Alverson, Bloomington, Ill.

A Paper read before the Illinois State Veterinary Medical Association.

Under this heading I shall confine myself to the mare and cow, and, of course, shall not touch in the class of accidents.

Metritis.—In the mare this disease is considered by many authentic writers quite a serious disease; especially Fleming, in reading which one would be led to give a serious outlook to every well-developed case of inflamed womb.

Symptoms.—Quite often the first symptoms are those of colicky pain. Then a discharge from the vagina, with a more

or less fetor appears. Breathing quickened, temperature elevated, pulse accelerated, drawn up in flanks, and pain on pressure in that region. Symptoms come on in from one to five days after foaling. An examination per vagina, finds the womb placcid, hot to the touch, and containing some liquid or semi-liquid material. In some cases the inflammatory process extends to the feet, and the animal is very stiff and sore from inflamed laminæ tissue.

Treatment.—First with the hand or a sponge take all foreign material from the uterus. Then inject lukewarm water containing one teaspoonful of carbolic acid to a quart of water; this to be repeated two or three times a day. When the feet are affected, cold applications locally are indicated, and sacks containing ice bandaged on the feet act nicely. In cases where the discharges are very fetid, I have used permanganate solution in place of carbolic acid, with good results. Administer internally quinine or cinchonoid solution to allay fever, and, when animal seems very weak, give alcohol or spirits of nitrous ether in drinking water.

PARTURIENT ECLAMPSIA IN MARE.—Comparatively seldom seen, and then not always recognized.

Symptoms resemble quite closely those of tetanus. They are shown in from two or three weeks to as many months after foaling; usually when the surroundings of the mare are changed, as when taken from pasture and put at work, or shut up in some strange place with the colt, the worry seeming to be an important factor in the cause. The symptoms, while like those of tetanus, will admit of some distinction. It will run a more definite course; the jaws are never as closely set as in acute tetanus. The muscular contractions and consequent phenomena at the eye are not nearly so apparent, and, in fact, the muscular contractions generally over the body are not as tonic as in acute tetanus, and an acute attack of tetanus is the form eclampsia most resembles.

Treatment.—Free blood-letting, about two gallons, varied with the size of animal, followed by large and repeated doses

of fluid extract of belladonna and canabis indica, serve quite successful in cases where attention is given soon, recovering in from four to eight hours. Fatal cases occur in ten to twenty-four hours.

In the cow metritis is not a very serious trouble, and usually yields readily to some of the treatment for same in the mare. Thorough cleansing of the uterus with aseptic injections being all that is necessary in many cases.

PARTURIENT APOPLEXY is, however, far more serious.

Symptoms.—Usually when called to a case the animal is already in the recumbent position, unable to rise, the head thrown around to the side, eyes dull, scarcely if at all sensible to the touch. Lacteal secretion very much diminished. Occurs from a few hours to three or four days after parturition. If the veterinarian's attention is called to the case at the outset of the symptoms, he will find the animal in a somewhat nervous condition, a wild look about the eyes, some twitching of muscles or tossing of head, and on moving the cow she will show weakness of gait, not having proper control of her hind parts, and perhaps unable to proceed without falling.

Treatment.—If seen while still able to be on her feet, drawing blood and applying cold to the head will sometimes be all that is necessary to a hasty recovery. The animal should never be given anything in the shape of a drench, on account of the danger of strangulation. When down, my directions for treatment are to put the animal in a comfortable position; a small sack of ice tied around the horns or to a halter; the cow made to lie on her chest by keeping her head around to the side, and a log, box or some convenient packing under the shoulder of the opposite side. A thin sheet, taken from a bucket of cold water, and placed over her baek, this to be covered with plenty of good dry covers, and the sheet to be resaturated whenever it becomes dry and warm. Occasional stripping at the teats, thus stimulating secretion, and the administration hypodermically, every two hours, of two and one-half grains of muriate of pilocarpine in solution.

SOME REMOTE ANCESTORS OF THE HORSE.

B. Dr. W. J. Martin, Kankakee, Ill.

A Paper Read before the Illinois State Veterinary Medical Association.

During the last few years the science of paleonthology has made such rapid advance, that by its aid we are able to trace the ancestors of some of our domestic animals to a very remote part, and to prove beyond a doubt that the present horses possessed by them have only been arrived at by a series of gradual changes or evolution from a very simple origination to to the highly complex one they possess to-day. To no animal can the law of evolution be applied better than to the horse; in fact, the horse family may be considered as furnishing an almost positive proof of the correctness of that theory. It was long one of the dogma of natural science, even up to the beginning of the Nineteenth Century, that previous to the discovery of the Western Hemisphere by Columbus, no horse had ever existed thereon. These reasonings were most effectually disproved by Buckland in "Beachey's Voyage to the Pacific in 1831," in which he found the fossil remains of horses frozen in the cliffs of Eschsholtz Bay, Alaska, and which there is good reason to believe were the ancestors of our present domestic horse. The next account we have of fossil horses is by Chas. Darwin, in 1832, in his voyage round the world in the ship "Beagle." He found in the Prmpean deposits of Bahia Blanca, South America, together with the remains of the mastodon, megalonyx, megatherium, toxodon, and other extinct animals, the teeth of an extinct horse family. This tooth, Prof. Owen found, in eomparing it with one found in North America by the eminent geologist Chas. Lyell, belonged to an extinct family of American horses, and gave to it the name of Equus Cursidene, from the peculiar shape of the teeth. We have in the science of patentology men who have acquired a national reputation, and have done their work most nobly in assisting to unravel the mysteries of nature. Foremost among them stands the name of Dr. Joseph Leidy, the eminent com-

parative anatomist of the University of Pennsylvania, and it is to him we are indebted for our first systematic knowledge of the extinct horse family of this continent. He enumerated and described no less than nineteen classes of fossil horses, from remains collected by the Philadelphia Academy of Sciences. Prof. E. D. Cope, of Philadelphia, has also made fossil horses a special study for many years, and was the first to discover and describe some of the missing links in the horse family.

In order to give anything like a complete history of the geneology of the horse, it becomes necessary for us to take a glance at the geological formation of the earth. The earth, as you know, is divided into epochs, or periods of time; these we enumerate from below upwards, and they are as follows: Beginning with the first, or primitive formation, we have the Archean, a period in which, as yet known, no life had made an appearance on the earth. The next epoch is the Paleozoic, or the era of ancient forms of life. Next come the Mezozoic, or the era of middle life; while fourth and last comes the Cenozoic, or the era of more recent life. Now these periods just named are further subdivided, but for our purpose it is not necessary for us to name only the last. The Cenozoic period is divided into two periods, viz., Tertiary and Quarternary. Now these two periods are further subdivided into Eocene, Miocene and Pliocene. It is with these last subdivisions we have here to do, for it is in the Eocene formation that mammalia first make their appearance on the earth. It is here that we find an animal having distinct ungulate characters, namely, the possession of a scapula, and feet without claws. This animal antedated the elephant, the rhinoceros, tapir, and, in fact, all known hoofed mammalia. The name of this ancient beast is Phenacodus, and Cope has referred nine species to this genra. Phenacodus had five functional toes on each limb, which was semi-plantigrade. The number of teeth was, incisors, 12; canines, 4; premolars, 16, and molars, 12, or 44 in all, with a small diastema between the canines and premolars. The skull presented the usual characteristics of other Eocene mammalia in the incomplete condition

of the zygomatic. The uumber of vertebrae was as follows: Cervical, 7; dorsal, 14 to 15; lumbar, 6 or 7; sacrum, 3 or 5; caudal bones present are 11, but many more are wanting, as the tail was very long. Cope, in referring to a restoration of this animal, says: "The foregoing measurements show that Phenacodus Primaraeur was in size between that of a tapir and a sheep. Its body was rather longer than these animals, and its legs shorter and more robust, This animal was omnivorous in its diet." Next in upward succession comes an animal known as Hyracotherium. Here we find a distinct advance over Phenacodum. Hyracotherium, having but four toes on each front limb, and but three on the hind ones, I may say in passing that the change from Phenacodus to Hyracotherium was not sudden, but, on the contrary, was very gradual, as we can trace the ruins of several families between Phenacodus and Hyracotherium. Among these may be mentioned Memeotherium and Systemodon. These genera were all five-toed, and the species belonging to them serve as a bridge to connect the families of Phenacodus and Hyracotherium. The dental formula in Hyracotherium was the same as in Phenacodus, but the triturating surface showed a more complex structure. The size of this animal ranged from that of a fox to a sheep. The remains of this animal has been found very extensively in the Wasatch beds of Eocene age in this country, and also in the London Clyde of the same period in England. The next animal connected by national affinities with Hyracotherium, but of a higher order, is Anchitherium. The remains of this gender has been found in abundance in the miocene foomation of the Bad Lands of the White River, Dakota. In general outline the skull of this animal bears a striking similarity to that of the horse. The number of teeth possessed by this animal was 44 in number, and are identical in form with those of the same family found in France. Although the teeth of this animal number 44, we can see a great reduction in size of the first premolars in each jaw, which goes to show that even at that early day the process of eliminating the supernumerary teeth

had begun. Nearly all the osteology of this animal resembles corresponding parts of our present horse, and it can be asserted with confidence that Anchitherium is in the direct ancestoral line of the present horse. The number of digits was three on all the limbs. The middle toe was large and well developed, while the outside ones only came to the ground, when it was marshy. In size this family varied from 3 to 4 feet in height, and was strictly a vegetable feeder, and had considerable speed. In the family of Anchitherium were the following genra: Hyp-ohippus, Anchihippus and Parahippus. These animals were closely allied to Anchitherium, whom they resembled very much in structure, the only difference being that they were somewhat larger.

We now emerge from the Miocene formation to that of the Pliocene, and in doing so we place ourselves, as it were, on a more solid ground, and from this time onward can trace, almost without a break, the horse to his present place in mature. The first equine animal we meet with in the Pliocene Strata is that known as Hipparion, a most graceful animal indeed, resembling our present ass in size. The feet of Hippa-rion still possessed the extra toes, but these were now reduced to mere rudimentary appendages. In other respects the skel-eton was constructed on the same general plan as that of the present horse. The remains of this animal has been found in the Tertiary formation of Europe and Asia. Abundant remains have also been found in this country. The next animal we find closely related to Hipparion is an animal called Protohippur, and from which it does not differ in any essentiai manner. We now leave the Pliocene Strata, and advance upwards to that known as Quarternary, and in this formation we find the re-mains of horses differing in no particular manner from our present horse. Dr. Joseph Leidy, in summing up his conclu-sions on the extinct horses of this country during this epoch, says: "I think there is evidence in favor of the probability of there formerly having existed three distinct species of horses during the Pliocene and Post-Pliocene in North America."

And probably *Equus Farrilis*, or *Equus Cabballus*, may have existed in the extreme northwest part of the continent, exending from Asia. One of the strange facts in connection with the history of the horse, is their becoming extinct in the new world, and at a period long anterior to the coming of Columbus, as at that time the Indians had not the remotest tradition concerning him. I have spent many years in investigating the works and mounds of the Monnd Builders, a race of mankind who long antedated the Indians, and from the innumerable numder of bones of nearly all kinds of animals fonnd in their mounds, I have not been able to discover a single one pertaining to the horse. So that the horse must have disappeared from this country at a remote time indeed. Why they should have become extinct, and upon their reintroduction from Europe multiply with such great rapidity, is one of the problems that natural science has not as yet succeeded in unraveling. In Europe, during the Glacial and even the Preglacial period, countless herds of horses roamed over the land, and the half-savage man of that period had not yet domesticated them, but they furnished one of his main articles of diet, fot there has been found in the lone caverns of that country horse remains along with those of the mommoth, cave bear, hyena, and even man himself. I have seen the right metacarpus of a horse taken from a cave at Dordogne, France, which closely resembled the present horse, only the bones were very small, and you may judge of the age of those bones when it was estimated that they belonged to the Glacial period. In conclusion, I will say a few words in regard to the

DOMESTICATION OF THE HORSE.

The horse, from an archæological point of view, is comparatively a recent servant of man. That he was not used by man as a beat of burden during the older and newer Stone Ages seems certain, and it was not before the Age of Bronze that man brought this animal under subjection. That the horse existed in Europe and Asia from a remote period of time seems

certain. Not only do we find his remains, together with those animals that have been extinct, but also rude drawings of him on tusks of ivory and bone have been found in the caves occupied by pre-historic man as an abiding place. The first authentic account of the domestication of the horse is found in the tombs and on the monuments of the nineteenth dynasty of Egypt, 1900 years before our era, and then in those tombs we see paintings, representing men in the act of administering medicine to sick animals. Showing that at that remote period the veterinary art was known and practiced.

REPORTS OF CASES.

AN INTERESTING POST-MORTEM.

By L, H. Hempelmann, D.V.S., House Surgeon to the American Veterinary College—Hospital Department.

On December 11th, 1893, a bay gelding was presented to the college by Dr. J. S. Lamkin of Yonkers, N. Y., who gave us the following history:

The horse had been troubled with incontinence of urine for about two months which had been treated, but without success. The urine was always mixed with mucous and at times contained some blood.

The patient was placed under observation; every day his bladder was emptied by a catheter and the urine—about two ounces usually—collected. On rectal examination the fundus of the bladder seemed to be somewhat thickened, but no calculus could be felt.

A week after the patient came under our observation, it was decided to explore the bladder. The urethra was accordingly opened and a sound introduced into the bladder, but nothing definite could be discovered.

The animal was then destroyed for a post mortem examination, which in many respects proved to be highly interesting.

The walls of the bladder were found to be about three-eighths of an inch thick and a large neoplasm, probably an epithelioma, was found at the fundus of the organ. This growth so diminished the capacity of the organ that it was impossible for it to contain more than four or five ounces of urine at a time. This thickening caused the incontinence in all probability. The left kidney and ureter were entirely absent, and no trace of either could be discovered after a most diligent search. The right kidney was found in its usual place and was of normal shape but very much enlarged, weighing forty-five ounces, or very nearly as much as both usually weigh, viz.: fifty-two ounces. The right ureter was about twice its normal size and was enormously distended near its insertion into the bladder. This distension commenced about three inches from the bladder and gradually increased until its insertion into the bladder, where it was about two inches in diameter. The thickened condition of the walls of the bladder probably interfered with the entrance of urine, which gradually gave rise to this dilatation.

LYMPHADENOMATOUS TUMORS.

By M. Bunker, D.V.S., Newton.

I have sent you by Adams Express to-day a keg containing a specimen which I think you will agree with me worthy of a trip to the A. V. C. The animal was an express horse, about six or seven years old, strong and hearty, in fine fiesh, weighing, when in usual working order, about 1,350 lbs. On the 26th of November I saw him first, and the only symptoms to be noticed was a general œdamatous condition of the neck, breast and fore legs. I suspected purpura haemorrhagica, but could not find any other of the characteristic symptoms of that disease.

I gave the horse a cathartic, and put him on stimulants and tonics. He gradually improved in general condition and appearance, the swelling going off almost entirely. Later on

he had an attack of pleurisy and some pneumonia. I applied a good mustard paste to the chest, and relieved his condition.

His general condition did not improve, gradually reducing in flesh, loss of appetite, legs swelling again, and also on breast. About a week ago I found an odor to the breath, and said suppurative pneumonia. Yesterday I had him killed; post-mortem this morning. There were probably two or three stable pailfulls of fluid in the chest. Both lungs more or less adherent to the costal pleura. The lower third of both lungs showed pneumonia, and there were small abscesses where suppuration had commenced, but not what one would call a bad case of suppurative pneumonia. On removing the lungs from the heart and its vessels, I found this mass which you have in the keg. It is something new to me, and I would like to have your opinion on it. It filled the space between the two lungs, extending nearly back to the diaphragm and way forward into the muscles of the thorax. This mass came out with the lungs, and so I did not save any more of it. The other part was beginning to break down, and was very fetid.

This description is not as extended as you might wish, and if you want more I will write it.

Weight of mass, 13 lbs. It was put in strong alcohol, so as to be fit for slides and to preserve the shape.

What is it? What caused it? Is it tubercle?

[SPECIMENS EXAMINED,—Two distinct tumor formations removed from mass surrounding aorta and œsophagus.

In both cases they consist of lymphoid or adenoid tissue; *i. e.*, delicate retriculum and lymph cells, the one harder than the other, and larger base excess of fibrillated bands or net-work, and is the older formation. The softer tumor consists largely of cells with fine net-work. No degeneration is noticeable, and therefore they probably belong to the lymphomata, which originate usually from lymphatic glands. Clinically are innocent tumors, except as lymphadenoma.]

TRAUMATIC TETANUS.

BY W. F. DERR, V.S., Wooster, O.

On Dec. 19, 1883, I was called to see a well-bred five-year-old mare, which the owner said had been lame for about

two weeks. I found on examiuation that she was lame in the left hind foot, the result of a nail puncture, and she had all the characteristic symptoms of traumatic tetanus. I removed the shoe and allowed the pus to escape, and applied a boot. She was then carefully led to my hospital, about one mile distant. Being of a somewhat excitable nature, the jaws were well locked on her arrival at the hospital. She was placed in a large darkened box, and the wound was well washed with a solution of bichloride (1 to 500). Then had a poultice applied, with the orifice first well smeared with the solid extract of belladonna. and she was put under belladonna and calabar bean internally. She was left for the night at 11 P. M. At 6 A. M., on the 20th, I was hastily called by the barn-man, saying she was down and dying. I found her down in the corner, with all the symptoms greatly exaggerated and sweating profusely. I supposed she was dying in convulsions, and pulled her out and helped her on her feet, but she no sooner gained her feet than she again threw herself to the floor, and on examination I found her to be suffering from indigestion, with impaction of the colon, having considerable tympanites. Her jaws were completely locked by this time, and she was suffering terribly. I injected morphine gr. x hypodermically, and gave a solution of aloes as well as possible, considering the condition of the jaws. She received no relief whatever from the morphine, and I then gave chloral ℥i; also enemas. The tympanites increasing, with no alleviation of symptoms, sbe was relieved by puncturing the cœcum, which was repeated three times during the day and night. No evacuations nor action of the bowels whatever, and the animal still suffering considerably, I thought I would try the effect of ezerine and pilocarpine, although knowing it to be not the best of treatment, the bowels being held by powerful contractions. I gave her eserine sulph. gr. i, pilocarpine, gr. iss, hypodermically at the time of her suffering excruciating pain. The drug did not act as desired, having no effect on the bowels, but acted as an anodyne and relived the pain almost entirely. This lasted for about two hours, when she again

became restless and I repeated the dose, when it again had the same effect of relieving all pain. She then remained comparatively quiet until the next day, in the meantime receiving the belladonna and calabar bean. She took some nourishment in the way of gruels. On the evening of the 21st she had a small passage, and from that time on she began to slowly improve. On the 27th, from some cause, probably the noise about the hospital, she had a relape and again became very nervous and excitable. I then moved her into an out-of-the-way stall, where she would not be molested but little, and she again began to slowly improve, lying down at intervals of every three or four nights.

In about three weeks she took distemper very badly, and coughed very much, and had a profuse discharge from the nostrils. I gave her the usual treatment, and in ten day she had recovered from that. She remained very stiff and the muscles *very* rigid, especially in the leg that she had been lame in. She was sent home on February 1st, still very stiff, but eating and feeling well. The muscles of the jaws had relaxed completely, and she could eat as well as ever.

At the present writing (February 7th) she is doing well, and will, in all probability, be well in three weeks. The object of writing this is to report the effect of eserine and pilocarpine. I do not know if it was the drug or the condition of the system which caused the peculiarity of its action.

A DOUBLE MONSTER PROBABLY OF THE HETERALIAN ORDER.

By H. B. Ambler, D.V.S., Chatham, N. Y.

On the evening of January 4th I was called to attend a cow in labor. I found a six-year-old cow that had been in violent labor some time, but her pains had grown considerably weaker.

Upon examination, I found the foetus in a posterior presentation, three hind legs and two tails in the vagina. The foetal fluids had all escaped, foetus dead, the uterus hot and swoollen from the constant contraction against the foetus and the various

manipulations which the cow had been subjected to by inexperienced hands. Consequently a diagnosis was very difficult, and proved for several hours to be very puzzling.

I found the three hind extremities attached to a body of large size and shape, such as could not be delivered intact through the natural channel.

I decided to try embryotomy, and succeeded in removing the three extremities that were presenting themselves; then I found myself stuck; could not find any more posterior extremities, but could feel a hoof of what I supposed to be a fore extremity.

The pecular formation of the pelvis, together with the swoolen condition of the uterus, made it impossible for me, with the instruments at hand, to proceed any further with the operation.

As the owner was willing to resort to anything that had a chance of saving the cow's life, I gave the cow a few hours' rest, as well as myself, and then started to remove the foetus by laparotomy, but upon making my incision in the flank I found the peritoneum covering the uterus, and that, contiguous to it, in an inflamed state, and blood-tinted serum in the peritoneal sack. As it was beyond all reason to suppose that an animal in this condition could survive such an operation, I immedlately destroyed her.

I then removed the foetus, uterus and all through the flank, and found a double monstrosity, so complex that I will not attemp to name it.

It consisted of one nearly completely developed body that had been lying in a lumbo-pubic position, and united to it at the abdomen and pubis was a second, short and smaller individual. The extremities of the first were all well developed, the near hind leg being drawn forward and under the off-fore of the second. The extremities of the second were all well developed except the near fore, which was short, crooked and directed backwards, and off of the scapula of this extremity was a projection about six inches long that looked as if it might

have started to have been a ninth leg. About four inches below the tail of the second was a vaginal projection, one and a half inches long, and covered with hair, that probably was intended for an anus. There was no vulva, penis, nor testicles visible on either calf. The head of the second was situated on a very short neck that was applied against the posterior portion of the sternum of the first. This head was short and presented a very peculiar formation. The ears were situated lower than the natural, the left one being very small and covered with long hair. the opening to the ear proper being just anterior to it. The lower jaw was divided up so as to present a very interesting formation, the incisor teeth were in two separate bones (three in each), the molars being on a bone by themselves and immovable.

Unfortunately, this calf was in an advanced state of decomposition, and as I was very busy at that time, it had to be buried without my making a dissection of it.

What the arrangement of its internal organs were can only be a conjecture, but they must of necessity have been very complex.

[While we thank Dr. Ambler for his communication, and for the photographic views accompanying it, we regret that these were not sufficently developed and clear to permit of their reproduction.—EDITOR.]

UNCOMMON ABDOMINAL OBSTRUCTION.

BY F. P. WILLIAMSON, D.V.S., Raleigh, N. C.

Post-mortem examination on female calf, age 6 months.

All organs in normal condition, in abomasum was contained a cheesy mass measuring 9 inches in length, 4½ inches in breadth, 3 inches in thickness, weighing 31 ounces; just back of this mass, completely blocking up the pyloric opening of the small intestine, was a quantity of sand an inch in thickness. That this effectualiy stopped the passage of food was shown by the fact that the 180 feet of intestine back of this was entirely empty.

EXTRACTS FROM FOREIGN JOURNALS.

PARASITES OF THE SARCOMA.

By RICHARD MIDDLETON, D. V. S., Philadelphia, Pa.

The author has in the last year written upon the small bodies found in the intima of cancer cells, which he considers of parasitic origin. His latest effort, in four cases of cancer of the mammae, has permitted him to positively detect their animal nature.

They consist of a very small body, which in the first stage of development is surrounded by a protoplasmic envelope, all of which is enclosed in a capsule. As the development progresses, the protoplasm gradually becomes less and less ; the body continues to acquire dimensions, until finally it ruptures and discharges numerous round refractory globules.

In its primitive state the parasite takes kindly to haematoxylin, while in its maturer condition it yields only to eosin and aniline orange. According to its structure and history of development, this microbe appears to belong to the class of cocci.

At the close of his article the author mentions an easy method of discovering the coccus by means of the staining combinations. The section of cancerous material, cut very thin, is hardened, and colored with a mixture of saffron and haematoxylin, coming after this in a solution of anilin orange. By this procedure the nucleus assumes the saffron, the protoplasm the orange, and the body of the parasite the haematoxylin.—*Deutsche Medic. Ztg.*

PELVIC ABSCESS.

Ber examined a 1½ year old calf which had suffered for some time past with constipation and loss of appetite, and, remarkable to state, the rumination was not influenced by the indisposition. After two weeks of these troubles they suddenly disappeared; later, however, the same symptoms reappeared, and with them a swelling which protruded at the left side of the anus, completely occluding the rectum.

By incising this tumor, one and a half quarts of pus were liberated, and immediately thereafter a copious defecation. Treatment consisted of clyster of ½ per cent. lysol solution.

In a second case loss of appetite had existed in a cow for a considerable time, finally inducing a cessation of rumination. The circumference of the abdomen continued to increase, and by a manual examination per rectum, numerous tumors or irregularities were detected.

Slaughter was advised, and after death no less than twenty-three large sub-peritoneal abscesses were exposed.—*D. Th. Wochenscrift 27.*

PUERPERAL PARALYSIS.

District veterinarian Rasberger was called to see a cow, unable to rise, which had calved six hours before. A subcutaneous injection of 1½ grains veratine was administered. From the conditions visible, and the fact that for a period of thirty hours neither feces or urine had been passed, the diagnosis was made of post partem paralysis.

Drastics and excitants were applied, but the animal was killed. Post-mortem negative.

Another case, taken thirteen hours after parturition, became very weak, fell and again stood upon her feet. Pulse weak and rythmical; anorexia with constipation and retention of urine. On the evening of the twenty-third day the patient fell, and could not again rise; convulsions with dyspnea rapidly debilitated the animal, so that slaughter was advisable. Post-mortem negative.

Rasberger recalls 25 cases neccessitating slaughter. The results of the examinations in these showed ten to have suffered emphysema and œdema of the lungs, and four traumatic pneumonia from particles of food. Diseases of the brain not present. The therapy consisted of cold applications to the head and neck with hot fomentations, one over the pelvic region and posterior limbs; internally the following as a drasticum:

℞ Ol. ricini ℥ xxx.
Ol. tiglii ℥ vi.
M. et f. Haustus.

As a nervous extitant, digitalis and spiritus dilutis with caffein, camphor or eserine hypodermically. The bladder should be emptied every eight hours by means of the catheter. —*W. f. Th. R. u Vzcht. 32, '93.*

ECZEMA IN THE HORSE.

A nine-year-old saddle stallion suffered from the middle of June to the end of July from a cutaneous eruption, A careless person might have looked upon the same as the usual heat rash, but when closely examined it presented unmistakabie characters of differentiation.

At the beginning we noted spots of incrustation upon the mane and hips; these resisted all treatment, increasing in extent so rapidly, that in fourteen days the whole mane was a mass of confluent crusts, under which the cuticle was wet, and bled freely. About this time there appeared over the surface of the body swellings the size of peas; these passed in regular stages to scab and depillated areas with a destruction of the skin pigment. Upon the nose, lips and in the region of the eyes, malignant prominences could be observed, with a few knotty formations at the base of the tail.

Prepuce swollen but not painful; absence of pruritis in the same and also in the mane, but upon manipulation the sensitive nature of the malady was made manifest. Glands of the laryngeal and inguinal regions enlarged. Gums of the incisor teeth swollen. Lips and gums irregularly punctated by postules and errosions. No salivation and no disturbance of a constitutional nature was present.

Treatment.—After twice bathing in creolin and lysol solutions, the secreting areas were rubbed with a zinc salve containing iodoform and tannin. Healing took place, after which the swollen glands subsided. This stallion experienced the same or a similar affection the year previous; the treatment was the same. The universal spreading over the body, and its benign character, distinguishes it as an unusual disease of the cutis. The aetiology remains hypothetical.—*Zeitscher f. Vet. K., 6, '93.*

MERCURY POISONING.

A farmer who had bought from the druggist a pound of grey mercury salve as an agent for lice, applied the same to nineteen young cattle, with considerable friction and over a large surface.

On the next day all the animals so treated refused their mess, and exhibited spasmodic contractions of the general muscular system and regular in character; also a foetid diarrhœa having a most intolerent odor and disgusting appearance. The gait exceptional, and some few were too weak to maintain themselves standing. After several days the symptoms became more benign, but the local lesions, where the salve had been applied, only now commenced to appear; the latter consisted of a cutaneous swelling, and later a moist eczema of a most irritable nature.

This eruption healed very slowly after the lapse of two months. In some of the individuals the skin became hard and scaly over more or less of the surface. The animals surviving the severest local lesions were attacked fourteen days later with painful laryngitis and subsequent pneumonia. Respiration, 40–50; pulse, 95; temperature, 104° F.

In the other patients only the cough appeared; a young bull, six months old, succumbed to the application.—*Berliner Woch. 4, '93.*

RUMINATIO HUMANA.

Hille communicates the following upon the subject of rumination in man. The first case respects a 45-year-old cow hand, who had regurgitated regularly since his sixteenth. The act was continuous, and occurred independent of food consumption, and was not under the volition.

The second and third cases were respectively a 53-year-old man and his 21-year-old son. The latter had been accustomed to the process since early childhood. The father had suffered for a long time from dyspepsia, which he stated was contracted in his twentieth year.

The rumination in the last two instances was governed by

the will, and could be entirely suspended, although, when the attention was not fastened upon the same, it proceeded uninterrupted.

Ruminatio humana is not to be confounded with that of animals, which is a physiological action.—*Deut. Med. Ztg. No. 37.*

EXPERIMENTAL IMMUNITY AGAINST INFLUENZA.

Dr. Bruschettini has made exhaustive trials upon the activity of the influenza bacillus, and finds that the living cultures upon bouillon or agar-agar, when intratracheally injected, have but a slight pathological activity; this is not the case, however, when the microbe is propagated upon blood, its virulence is well marked.

The best material, and that which imparts the greatest degree of immunity, is the latter blood culture after it has been filtered throngh the Berkfeld apparatus. This serum possesses a strong anticoxic power, but does not destroy the bacteria. The serum of animals so vaccinated, when injected into others, imparts its quality to them, and guarantees an immunity from the affection.

This liquid also has the power of transmitting a curative effect, in as such as rabbits may be saved from death by its application.—*D. Med. Wochcnschrift, 33, '93.*

VALUE OF INJECTIONS OF MALLEIN IN THE DETECTION OF LATENT GLANDERS.

For some time the Urban Axle Company of Paris has sustained great loss from the existence of an endemic state of glanders in their stables. Despite the fact that every suspected horse was immediately killed, and that its neighbors were isolated, the endemic was fed by latent cases. How were these to be detected? The required test appears to have been discovered in mallein. The employment in subcutaneous injections on 4,450 horses was followed in 562 instances by the characteristic rise in temperature. These 562 animals were slaughtered,

and the necropsies revealed unmistakable evidence of the presence of glanders, the existence of which could not possibly have been suspected ante-mortem. In only four cases did the test fail.—*Vet. Record.*

DISLOCATION OF THE RIGHT KIDNEY.

By E. W. Enderton, M.R.C.V.S., Maybole.

The subject of the above accident was a valuable brown seven-year-old hunter gelding, the property of provost marshal of this town.

On the 22d of October I was called in to treat him for a wound on the fore-arm received whilst hunting, from the kick of another horse (an entire). This caused him very little inconvenience, and he was soon ready for exercise.

His first hunt after this was on November 10th, about which I well remember telling the owner he must be very sparing with him as his horse could not be in hard going condition. However, a fair good day's hunting was obtained from him, but on this day he met the cause of his death.

In about the middle of the hunt an apparent trivial accident occurred of the nature of a blind jump into a dyke. After this happened he jumped a stone wall, but gradually lost spirit until finally a trot could scarcely be got from him. I happened to be in the provost's yard when the horse returned, looking very fatigued, and trailing the toes of both hind feet on the ground. I ordered him to be well groomed, a mash given, his loins rubbed with liniment, and administered a restorative draught.

At 12 o'clock at night, when I again visited my patient, I was agreeably surprised to find him looking quite cheerful, neighing for food, of which a little was given him, then we left him for the night. About 4 o'clock in the morning the stableman again visited him, when he was found to be in a similar condition, and a little more food was given him.

At 8 o'clock I was called down to see him, and found him in a pitiful condition, a profuse sweat covering the entire body, standing with all four legs drawn together, back extremely

arched, pulse 80, large and feeble; temperature, 101 3–5; a dull hard swelling over loins and extending over last eight ribs, principally at right side, continual scraping of bedding, which was no sooner strewn out than was gathered up again in lumps; never attempting to lie down; there was no passage of fœces or flatus, nor yet of urine until about three hours before death. My diagnosis was some internal injury, and the prognosis unfavorable.

About 3 o'clock his temperature rose to 104, and continued to rise until death, which occurred a few hours later, it being then 108. About this time frequent and small quantities of urine tinged with blood were evacuated with a considerable amount of pain. About 5 o'clock he went down never to rise again, being in extreme agony for about an hour and a half before death closed the scene.

Post-mortem.—All the organs in the body appeared perfectly healthy, except the right kidney, which was extremely friable, and could be easily crumbled between the finger and thumb. This organ was found about six inches out of its place, having slipped downwards and forwards; its capsule and surrounding tissues had undergone violent inflammation; extreme peritonitis was also present; fatty infiltration and deposition occurred in all tissues of the body.

Never having heard of such an accident before must be my plea for recording this one. The extreme fatty condition of the animal being to my mind the predisposing, and the sudden jerk occurring in the dyke, the exciting cause.—*Vet. Record.*

TWO FISH HOOKS AND LINE EXTRACTED FROM ŒSOPHAGUS OF COW.

By Archibald Renfrew, M.R.C.V.S., Broadway.

On October 26th I received the following telegram: "Come to Park's Farm, Evesham, at once. Cow with fish hook in throat."

On reaching the place I found the cow lying on her sternum, head and neck stretched out, anxious expression, and drooping ears. The œsophagus, with its surrounding tissues, was very

much swollen, and painful from the pharynx right down to its entrance to chest. A piece of string hanging loosely from the mouth was fastened to the near horn; the cow at short intervals being seized with severe fits of coughing, associated with copious discharges of saliva tinged with blood from mouth and nostrils.

Before making a minute examination of the parts, the owner gave me the following information: The piece of string so-called had, by a peculiar knot just outside the mouth, been identified by the shepherd as a piece of a fishing line, on the end of which, he said, were fastened two fish hooks. The shepherd's cottage is situated on the bank of the river Avon, and adjourning the field in which had been grazing Mr. Woodware's (the owner) cows. The line had been laid beside the fence, and keep being short the cow was supposed to have picked up the hook and line when licking around the root of fence. The owner also informed me that he had the day previous attempted to remove the hooks by the aid of a willow with a ring attached, but finding this gave rise to coughing and bleeding, he gave up the idea.

With the above information, I endeavored to locate the seat of attachment of the hooks, but this, owing to the œsophagus being equally painful and swollen throughout its visible course, I was unable to do. However, with Mr. Woodward's permission, resolved to try and remove the hooks by the use of the probang; so fastening a strong piece of string to that hanging from cow's mouth, I passed this up through the probang, minus the stillette, and over both I passed the mouth gag and fixed this in position, and then had the head of cow drawn well up by a rope from horns over the doorway, and with a man on each side to keep the head straight, I proceeded to gently pass the well-oiled probang with one hand, while holding the string with the other. The instrument passed down quite smoothly till within a few inches of the stomach, when it became interrupted, but with a very slight jerk it moved on, and now, slightly tightening string at outer end of probang, I removed

all together, and was pleased to find the two "missing links" still intact.

The cow did not feed well for a fortnight, nor did she ruminate during the first week after the operation, but subsequently did well.—*Vet. Record.*

PREVENTIVE INOCULATION AGAINST ANTHRAX AND SWINE PLAGUE IN HUNGARY.

A report issued by the Hungarian Minister of Agriculture with regard to the operations of Pasteur, Chamberland Laboratory shows that in 1892 806,932 animals were protectively inoculated, or nearly 200,000 more than in the preceding year. Since its institution in 1886, this laboratory has supplied material sufficent to inoculate 1,237,674 pigs, and so to protect them against swine plague; while enough has been furnished to inoculate 1,122,558 horses, cattle, sheep, etc., against anthrax. —*Vet. Journal.*

EXPERIMENTAL IMMUNITY AGAINST INFUENZA.

Bruschettini (*Rif. Med.* July 16, 1893) returns once more to this subject. In previous papers he demonstrated a pathogenic action of the B influenzæ on animals. He found the rabbit very sensitive to this infection, and was able to ascertain conditions under which this animal could be infected at will, either with a slight transitory affection or with a grave fatal disease. He showed that these two types corresponded closely to the varying forms of the disease in the human subject, both in clinical course and pathological effects. He next attacked the subject of artificial immunity, dividing his researches into three series. He sought first to vaccinate animals against the infection; having succeeded in this, he tried whether immunity could be conveyed from a vaccinated to an unvaccinated animal by injections of the serum derived from the former; finally, with the serum he has tried not only to prevent, but to cure the already established disease. In all these points he has met with success, and his conclusions may be summarized as follows: (1)

The rabbit may be without difficulty vaccinated against the effect of cultures of the influenza bacillus. (2) The material best suited for the vaccination, in that it gives the highest grade of immunity, is obtained by filtering serum cultures of the bacillus through Berkefeld filters. (3) The serum of animals thus vaccinated possesses a marked antitoxic but no bactericidal power. (4) This serum also possesses the property of conferring on other animals immunity both against the infection and intoxication produced by cultures of the bacillus. This property is so powerful that injections of the serum in the proportion of 1-42000th of the body weight suffice to induce immunity, or perhaps even less. (5) The serum has also a marked curative action, reducing the temperature of already affected animals, and preventing an otherwise certainly fatal ssue.—*Ibid.*

PARIS CONGRESS ON TUBERCULOSIS.

The following resolutions concluded the work of this important meeting held in Paris last July:

1. That butchers' meat should not be offered for sale until it has been passed as healthy by a competent inspector, and that the inspection of meat should be made in villages as well as in towns.

2. That public schools should be provided with spittoons in sufficient number, so as to prevent children spitting on the floors and that instructions be addressed in this sense to the managers.

3, That there is reason to demand that every animal about to be exhibited at a show subventioned by the state shall have been previously submitted to the tuberculis test.

4. That the tutors and inspectors of the Academy follow the example of those of Bordeaux and Chermont, and invite the institutors to join in popularising prescriptions against the contagion of tuberculosis.

5. That dead bodies should undergo an absolute disinfection before burial.

6. That tuberculosis persons should be collecten in special hospitals in groups, according to the stage of the disease, and all the fewer as the malady is more advanced; while as a transitory measure, the duration of which should be as brief as possible, the phthisical should be gathered in special halls, which ought to be disinfected by the procedures nox in vogue.

7. That apparatus for the sterilization of flesh from from tuberculous animals be installed in abattoirs in order to allow of the utilisation of such flesh without any danger.—*Vet. Journal.*

INTERESTING PROFESSIONAL ITEMS.

By N. N. S.

A much-to-be-admired and encouraged disposition is being daily evident among conscientious owners of cattle, lest they should be furnishing milk from tubercular cattle or disposing of the same to innocent purchasers.

Never was there a more representative gathering of the entire profession in New York City than assembled at the recent initial meeting of the New York County Veterinary Medical Association.

All the two-year colleges should gravely consider the fact that their graduates of the future will be debarred from member ship in the United States Veterinary Medical Association, and the time is not far distant when similar requirements will be adopted by state organizations.

Tennessee's State Board of Health are regularly kept informed by State Veterinarian Rayen of the prevalent diseases of the livestock in their state, especially those of a contagious and infectious character. Other state boards of health would do well to establish a similar practice.

The twelfth annual meeting of the Michigan State Association at Lansing on the 6th of February, had on its programme

the very interesting topic of "Professional Ethics," by Prof. Reycraft, of the Detroit Veterinary College.

Philadelphia receives daily a large consignment of milk from a herd of cattle, owned by one of her most prominent citizens, among which there have been a large percentage of tubercular animals, even though the owner has been cognizant of the fact for years.

Dr. Jas. A. Stuart, Veterinarian to the Canebrake Experiment Station, Alabama, has resigned to resume private practice again in the north at Beverly, N. J.

The second number of the *Veterinary Magazine* is replete with interesting material. With three strong, influential veterinary journals, America makes a strong showing.

The veterinary army bill now pending before Congress has received the endorsement of Generals Schofield, Merritt, Howard, Vincent and Badchelor, and has gained the recommendations of all the leading calvary and staff officers. They consider it a matter of economy as well as to the army veterinarians.

"An obscure and undescribed disease of the Deer Family," "Transfusion of Blood," "Penetrant Cauterization in the Treatment of Lameness," "Surgical Treatment of Lesions of the Hock," "Castration," "Osteo Porosis" and a number of interesting committee reports interested the veterinarians at their state meeting in Philadelphia on March 6th, to which a generous invitation was extended to all veterinarians.

Veterinarian ambulances are rapidly being adopted by the humane societies in all large cities. New Orleans has just had a very complete one constructed in Philadelphia.

North Dakota has added to her scientific bodies a state veterinary organization. Her corps of officers are well known and active, earnest members of the profession.

Secretary Morton has well won the gladly conceded approbation of the veterinary profession in his decision, that the assistant of chief veterinarians shall be graduates of veterinary science, and no longer chosen from the laity.

California, through the excellent work of her state veterinary organization, is doing yeoman work in veterinary sanitary agitation for the promulgation of laws in the interests of her people. Well-directed and oft-repeated will surely bring the much desired result.

The officers of the County Veterinary Medical Society of New York are all strong representatives of the profession and will no doubt make a very efficient corps of workers.

The "McKillip Veterinary College" of Chicago, will start out as a two-term school of twenty-four weeks each. What a pity it could not have been the pioneer of the most extended course of veterinary education in North America when its geographical location was so well adapted for such a movement.

President Hoskins, of the United States Veterinary Medical Association, was elected an honorary member of the new association in New York City.

New Orleans Board of Health has a veterinarian attached to her staff. A little while longer and there will be few boards without them.

The United States Veterinary Medical Association now has representatives in thirty-eight states of the union. This is a gain of fifty per cent. in six years.

Since the recent sanitary commotion at Harrisburg, Pa., some 400 of the 800 boroughs in the state have organized local boards of health, a number of which have already appointed veterinarians as members of their staffs.

COLLEGE COMMENCEMENTS.

AMERICAN VETERINARY COLLEGE.

The closing exercises of the nineteenth regular winter session of this institution took place on March 20th, at Chickering Hall, as usual, before a large crowd of friends of the college, of the new graduates and of the Alumni Association.

By the following programme the Soirèe was rendered most pleasant, and proved to be one of the most agreeable ever presented to a New York audience:

PROGRAMME.

Overture,	"Masaniello,"	Auber.
Scenes from "Panjandrum,"		Morse.
March,	"New York,"	Rogers.
Prayer,	Rev. W. B. Barrows.	
Music,	"Cavaleria Rusticana,"	Mascagni.
Conferring of Degrees,	Faneuil D. Weisse, M.D., President of the Board of Trustees.	
Music,	"Southern Caprice,"	Wilson.
Awarding of Prizes,	Prof. C. A. Doremls, M.D,, Ph.D.	
Music,	"The World is Mine,"	Farhblach.
Valedictory,	J. O. George, A. B., A. M., D. V. S., of the Graduating Class.	
Music,	"Robin Hood,"	De Koven.
Address,	Prof. Austin Flint, M.D.	
Benediction,	Rev. W. B. Barrows.	
Music,	"March,"	Rogers.

The graduating class numbered 42 gentlemen from various States in the Union, and was represented as follows:

Albert Francis Abbott, Dover, N. H.; George Cornelius Bretherton, New York, N. Y.; John Russell Bacon, Danbury, Ct.; Hugh Edward Clark, Cornwall-on-Hudson, N. Y.; Chauncey Leonard Chase, Berlin, Ohio; James Shaw Cattanach, Jr., New York, N. Y.; Augustus Henry Drucker, New York, N. Y.; Michael Joseph Doyle, New York, N. Y.; Harry Stillwell Field, Hempstead, N. Y.; Oscar Fausner, New York, N. Y.; William Rowan Fleming, Brooklyn, N. Y.; John Oliver George, A.B., A.M., Weaversville, Pa.; Hamilton Gutmann, Easton, Pa.; John Joseph Hayes, New York, N. Y.; Jacob P.

Helmer, Scranton, Pa.; Richard Wilkins Hewitt, Bridgeton, N. J.; Harry G. Hoover, Sterling, Ill.; John Kent, New York, N. X.; Newton C. Lazarus, Allentown, Pa.; George Leich, Brooklyn, N. Y.; James Lorimer Lindsay, New York, N. Y.

Patrick John McGuiness, Newark, N. J.; Francis Joseph McCaffrey, Brooklyn, N. Y.; Charles McCulloch, Jr., Howardsville, Va.; James Masterton, Biggar, Lanarkshire, Scotland; Charles Philip Martin, New York, N. Y.; William Brundage Moorhouse, Tarrytown, N. Y.; Robert Flanders Moore, Pocatello, Idaho; Ira Chasey Mattatall, West Tatamagouche, N. S.; Bryce Mars, Mew York, N. Y.; Harry Stanislaus O'Neill, Jamaica, N. Y.; Oscar T. Porzer, Brooklyn, N. Y.; Joseph Forman Roser, Maysville, Ky.; John Joseph Riordan, Beverly Farms, Mass.; Frederick Luman Ray, Leonia, N. J.; Albert T. Schnable, Indianapolis, Ind.; Wm. Christian Siegmund, Baltimore, Md.; Harry Clifton Terry, Torresdale, Pa.; Henry Otto Wolters, New York, N. Y.; Andrew Ward, Peacedale, R. I.; Christian Henry Westphal, San Francisco, Cal.; William Watkins Yard, Jr., New York, N. Y.

The various prizes were awarded by Prof. C. A. Doremus, in his usual pleasant manner, as follows:

Dr. W. C. Siegmund received the gold medal of the Board of Trustees for the best general examination.

Dr. W. R. Fleming carried away the Alumni Association prize, consisting of a set of books for the second best general examination.

Dr. R. W. Hewitt received the gold medal of the faculty for the best practical examination as recommended by the committee appointed for that purpose, consisting of Drs. Thomas Giffen, Herbert Neher of New York and L. McLean of Brooklyn.

The anatomical prize of the senior class was gained by Dr. R. F. Moore and the junior prize by Mr. W. Grützman of Richfield, N. J.

The College Association prize was awarded to Dr. J. O. George, who delivered the valedictory address.

The address to the class by Prof. Austin Flint, M.D., proved

one of great interest and was thoroughly enjoyed by the large audience. The opening prayer and benediction of Rev. W. B. Barrows completed this most pleasant evening's entertainment.

NATIONAL VETERINARY COLLEGE.

This institution held its second annual commencement on the 19th of March, 1894.

Fifteen seniors passed the examination and received the degree of D.V.S. (Doctor of Veterinary Science). Dr. Walter J. Stewart of Baltimore, Md., received the medal for the best general examination. Dr. A. G. Potter, of Adams, Mass., and Dr. O. B. Hess, of Pennsylvania, passed with honors in majcescules. Prof. D. E. Salmon, President of the Board of Trustees, conferred the degrees, and Prof. C. B. Michener, Dean of the Faculty, addressed the graduating class.

KANSAS CITY VETERINARY COLLEGE.

At the third annual commencement the following formed the graduating classes for the sessions 1892–94 and 93–95:

CLASS OF 92–94.—John H. Pitcairn, Minneapolis, Kas.; John Bell, Coalvale, Kas.; Dillard Ricketts Moscow, Mo.; Emele Pouppirt, Denver, Col.

CLASS OF 1893–94.—Clarence A. Atwood, William L. Elliott, Benjamin F. Kaupp, George M. Needham, William H. Rudrauff, Jr., Henry R. Thompson, James H. Cock, Albert A. Immel, William T. King, Scott W. Peck, John E. Topping, John O. Young.

NEW YORK COLLEGE OF VETERINARY SURGEONS.

The annual commencement of this institution took place on the 21st of March, 1894, and the following gentlemen received the degree of V.S. (Veterinary Surgeon):

Sylvester H. Dean, Grand Forks, N. Dak.; David B. Dennish, Trenton, N. J.; William M. Fleischman, Westchester, N. Y.; William Gall, Aberdeen, Scotland; Reuben C. Gross, East-

mont, Pa.; Elias A. Gruver, Hellertown, Pa.; Patrick J. Hogan, Minesville, N. Y.; Peter T. Keeley, Waterbury, Conn.; John A. J. Kiernan, Jersey City, N. J.; Wesley Massinger, Chalfont, Pa.; Elijah Mathews, Jersey City, N. J.; Frank A. McCullough, New York City; Bruce McKay, New York City; William H. Newton, Dunham Basin, N. Y.; Russell Orborne, Wilkesbarre, Pa.; John C. Petersen, Copenhagen, Denmark; Harry C. Shoemaker, Philadelphia, Pa.; Alfred J. Tuxill, Auburn, N. Y.; Edward E. Vaughn, Browns Mills, N. J.

SOCIETY MEETINGS.

MASSACHUSETTS VETERINARY ASSOCIATION.

The regular monthly meeting of the Massachusetts Veterinary Association was held at 19 Boylston Place, on Wednesday evening, October 25th, at 7.30 P.M.

Dr. Burr being absent, the Vice-president, Dr. Winslow, occupied the chair.

The members present were Drs. Blackwood, Ferguson, Howard, Lee, Marshal, Parker, Soule and Winslow. After the minutes of last meeting were read, Dr. Blackwood moved that they be accepted as read. Seconded by Dr. Howard. Carried.

Dr. Marshal wanted to hear from some of the members present on the subject of advertising. Dr. Becket had promised at last meeting to have some objectionable matter rectified.

Dr. Howard wanted to hear an expression of opinion from Dr. Lee on the matter.

Dr. Lee did not know that he has anything to say on the matter. Dr. Becket, of course, has his own opinion, and can speak for himself. He was sorry if the society did not believe in what he had done; he could not change his opinion, however. He further said, the veterinary profession had been compared frequently with the medical profession. Personally he does not think they are to be compared. In most cases in veterinary practice it is merely a matter of dollars and cents, in

the same way as the practice of law or banking or plumbing or the selling of groceries is merely a matter of dollars and cents. He does not see that there is any practical difference between the veterinary profession and these other money-making schemes.

Dr. Marshal was surprised that Dr. Lee looked upon the veterinary profession as a trade and not as a profession. It would put a stop to all advancement if we all believed as he did.

Dr. Howard thought Dr. Lee's statement was different from what we are used to. It is not usual to consider it only equal to a trade such as selling groceries or plumbing. Many have worked years to benefit the profession, and we have all benefited by it financially and stand better in the community in every way in consequence. Article I in the constitution says that one of the objects of the association is "to use its influence for the advancement of the profession both as a body and as individuals," etc. If our association has a constitution why not live up to it.

Dr. Rogers did not think any member will agree with Dr. Lee. He would know what it would mean to all of us if the profession was reduced to the level of dollars and cents. He was really surprised at Dr. Lee. Others, and even Dr. Lee himself, have striven to elevate the profession; he did not think Dr. Lee means all he says. Dr. Lee should have time to reconsider the position he has taken.

Dr. Lee repeated that he had meant all he had said. Veterinary practice was not the same as medical practice; it could not be compared to it; it was entirely a business transaction.

Dr. Ferguson thought there is a higher plane than any so far expressed; when it is considered merely as a matter of dollars and cents it lowers the profession; we should try to elevate it, not lower it. He considered the rise of the profession in Cambridge a good illustration of the rise of the profession in the country.

Dr. Parker thought the two professions were very closely allied, and the closer they were brought the better it would be

for both. The medical and veterinary professions are inseparably connected with each other, and the bonds are growing closer all the time. We all know that many diseases are intercommunicable, and in many cases the medical profession have to call on the veterinarian to aid him. If the profession is reduced to a trade, if it is made merely a matter of dollars and cents, it will ruin the profession; it will have fifty years work to do over again, and *the highest and best of the profession would be lost;* if every one looked at it in that light we would have *no scientists;* we would have *no advance;* we would be at a *standstill.*

Dr. Lee did not think the profession should be surrounded by sentimental ideas any more than the business of a banker, lawyer, analytical chemist, or a sanitary plumber. He did not mean to lower it, but other businesses besides it have done good to the people in general. The discussion began by criticisms on business methods; there was a popular predjudice against innovations of any kind. The man who introduced any innovation meets with opposition. In other businesses they are not hampered with codes, and he feels he should not be dictated to as to how he should conduct his business.

Dr. Blackwood said if Dr. Lee wishes to compare it with other professions, let him do so, and he will find that even the blacksmiths have their code; if he does not believe it, let him join the union and see.

Dr. Howard said that veterinary practice cannot be compared with business, because the science is not a *positive* one. If a person is driving along the street and his wheels get caught in the car-tracks, and he has a "smash up," he can go to a blacksmith, who will tell him how long, and what it will cost to have it repaired. On the other hand, if his horse goes lame, it is often hard to tell where the lameness is, not to speak of the cost of repair; he may have to call in some brother practitioner in consultation. The second may have an entirely different opinion from the first. What would be the result without "ethics?" Dr. Lee had compared the veterinary profession

with plumbers. Who drove plumbers into sanitary science but the medical profession? Then he compares our profession with chemists. Whoever saw a prominent analytical chemist putting out advertisements saying he would do business for so much. It is the same with prominent lawyers and theologians. All professions have either a printed code or an implied code; most of us do not need a code to go by; we have instinctive knowledge of what is right and fair. Continuing, Dr. Howard said, we don't dictate when it comes to the actual practice of the profession; we don't dictate as to the medical or surgical treatment of cases; we only ask that a member should comport himself reasonably to other members of the profession.

Dr. Lee said that in those trade associations where members have to work so many hours a day, a man is fined when he disobeys. In the veterinary profession if every visit should be charged so much, it would be a great benefit, but as things are now charges are not adhered to; bills are lumped and contracts made, and until the profession advances to the point of having schedule of prices, until some arrangement comes he does not see why he should be charged with being dishonest.

Dr. Howard: Dr. Lee says, "Until we have advanced to the point of having a schedule of prices." That is not advaneing; who can say I should not give my services for nothing as a charity. It is not advancing; it is going back to have a schedule of charges.

Dr. Ferguson was glad the subject of contracts had been brought up; when he first went to Cambridge, travelling quacks were selling their medicines to the large stables; he did not know how to get round them. After a good deal of consideration, he went to the large stables and got a contract with them; they to furnish medicines and a pharmacy; he got all the way from $4.50 to $7.00 a horse.

Dr. Rogers thought contracts make it much harder for young men to get started; he knows where he might have got work if it had not been for contracts.

Dr. Howard thought that was a good point; he did not see

how a young man is to get work against contract work; he asked Dr. Ferguson if he would be willing to give up contracts when fakirs were frozen out. Older men should not be jealous if young men are called.

Dr. Rogers thought young men could often underbid older men; he had had chances to do so, but had not done so because he had not thought it right.

Dr. Ferguson said, if there had been no quacks, there would have been no contracts.

The meeting then adjourned.

JOHN M. PARKER, *Secretary.*

The regular monthly meeting of the Massachusetts Veterinary Association was held at 19 Boylston Place, on Wednesday, November 22d, 1893, at 7.30 P.M., the President, Dr. Burr, in the chair.

The members present were Drs. Becket, Blackwood, Bryden, Burr, Emerson, Towle, Howard, LaBaw, Marshal, Osgood, Parker, Rogers, Simpson, Winchester and Dr. Stickney, honorary member.

The minutes of the previous meeting having been read and approved, the chair called for report of delegates to the Chicago meeting.

Dr. Emerson reported that the attendance was large and the papers good.

Dr. Winchester said that delegates from France and Australia were present. Masachusetts was well represented, as were other States. Some of the papers and discussions were of the greatest interest. The matter of advertising had also been taken up, and was at present receiving the attention of Dr. Hoskins. Instead of the present illumination, the seal of the association will be used for letter-heads and envelopes; this change will not be made until the association becomes incorporated, when the seals will be distributed for the use of the members.

Dr. Becket said that Dr. Winchester had pretty well gone over the ground. There was some good papers on "Tubercu-

losis," especially one read by Dr. Clement, of Baltimore, who gave an exhaustive *resume* of experiments; another by Dr. Pearson, of Philadelphia, who discussed the action of tuberculin. In speaking of the specific reaction, he said that in some animals there was no specific rise in temperature from the tuberculin; these were mostly cases where the disease was well advanced, and in these cases so much tuberculin was already in the system as a result of the disease that the few grains introduced did not create any particular disturbance; on the other hand, in the cases not so far advanced, the specific reaction was pretty constant.

Remarks were also made by Drs. Bryden and Osgood, both of whom had been greatly impressed by their visit to the White City.

Dr. Howard then moved that the report be accepted and the committee discharged with thanks.

Dr. Marshal seconded the motion, which was carried unanimously.

The secretary then asked the members to volunteer for papers for the ensuing meetings.

Dr. Simpson offered a paper on "Digitalis" for the January meeting.

Dr. Osgood moved that Dr. W. M. Simpson be asked to contribute a paper at the February meeting. Seconded by Dr. Blackwood. Carried.

Dr. Charles Simpson then asked for information as to whether cities are forced to appoint veterinary surgeons as inspectors. In Somerville an inspector had been appointed who was not a veterinary surgeon.

Dr. Osgood explained that if an appointee was unsatisfactory to the Board of Cattle Commissioners they could remove and appoint any one they wished at a salary of not over $500.

Dr. Howard then rose and said at the last two meetings the subject of ethics had been thoroughly discussed; a great deal had been said on the subject, and he would now like to offer a resolution.

Dr. Rogers thought it would have to lay over till next meeting to allow due notice to be given.

Dr. Howard wanted to know from the president if it was not in order to consider it at the present meeting.

The chair decided that it was in order, and could be offered at this meeting.

Dr. Howard then said that the question of ethics had been brought up for discussion and certain members had been severely criticised. The association has so far taken no action on the matter, and so he brought forward the resolution to express his feelings on the matter, and to enable the association to put itself on record on the stand taken by Dr. Lee. At the last meeting advertising was fully discussed, and attention was particularly called to one particular advertisement in the press. At that time Dr. Becket said that that advertisement did not receive his sanction. The other day he noticed the advertisement referred to was still in the paper. Consequently he introduced the resolution and saw no reason why it should not be presented.

Dr. Becket then said in reference to the last remark of Dr. Howard's, that he regrets it, and admits he has been negligent in not attending to the matter. It shall, however, be attended to at once. He does not sanction it.

Dr. Howard was pleased to hear what Dr. Becket said, as it practically sanctions the gist of the resolution, which is as follows:

Whereas, The question of ethics having received a full discussion, and in that discussion the methods of advertising of certain members having been severely criticised, be it therefore

Resolved, That this association hereby expresses its censure of the promiscuous advertising of the Boston Veterinary Hospital, and commend such management to a sincere consideration of the proper observance of our code.

Dr. Winchester moved that the resolution be accepted. Seconded by Dr. Blackwood.

Dr. Howard then pointed out that if the resolution is adopted by the association, it puts on record its condemnation of such advertising; on the other hand, if it does not adopt them, it puts itself on record as not condemning such advertising.

Aftcr some discussion, the chair put the resolution, which was carried.

Dr. Rogers then showed an interesting specimen of partial fracture of the sixth cervical vertebræ. The horse had been found in the morning with one of his hind feet caught in his halter rope. He was afterward unable to lift his head more than about eighteen inches from the ground. He was killed two months afterward, when the bones were found in the condition showed (fracture of lateral processes).

JOHN M. PARKER, *Secretary.*

The regular monthly meeting of the Massachusetts Veterinary Association was held at 19 Boylston Place, on Wednesday, December 17th, 1893, at 7.30 P.M., the President, Dr. Burr, in the chair.

The members present were Drs. Becket, Bryden, Burr, Carlton, Emerson, Howard, LaBaw, Marshal, Gsgood, Parker, Rogers, Sherman, Winchester and Winslow.

The minutes of the previous meeting having been read, Dr. Osgood said he wished to make a correction; in answer to Dr. Simpson's question about the appointment of inspectors he had said that the original appointment lay with the cities and towns. The inspector need not be a veterinary surgeon. If he was not satisfactory to the board, however, he could be removed by them, and another inspector appointed at a salary of not over $500 per annum. With this correction, the minutes were adopted.

The secretary then read a letter from the new *Veterinary Magazine*, asking the support of the association.

Dr. Osgood moved that the new journal get copies of the society proceedings as well as the old journals, the AMERICAN VETERINARY REVIEW and the *Journal of Comparative Medicine.*

Dr. Carlton then read an interesting paper on "Homœopathy as applied to Veterinary Medicine." In the discussion which followed, Dr. Winchester said that he had never "hung up his

shingle" as a homœopath; at the same time, he is a firm believer in small dosage; one of the most useful drugs he has used is veratrum vivide; he has used it for a number of years for all sthenic troubles, and all sthenic febrile conditions from whatever cause, in small doses, repeated frequently. In speaking of the difference in the action of drugs in different cases, he said that he had a 16000-pound horse that morning sick with azoturia; he had given a hypodermic injection of a two-and-a-half grains of morphine and less than a grain of atropine at 10 A.M.; at 4 P.M. the horse was "blind as a bat." At other times he has given as much as forty grains of morphine and five grains of atropine, and has not had the same results; on the other hand, he has seen a horse crazy from a grain-and-a-half of morphine and a quarter-of-a-grain of atropine.

Dr. Carlton thought the result in these cases was due to the atropine being in excess.

Dr. Winchester said it is a fact that we can give some horses proportionately a much greater amount than others.

Dr. Osgood thought Dr. Winchester gave an excessive dose in combination; he had never seen a horse get five grains of morphine and one grain of atropine without going crazy. The combination intensifies the action of both drugs. In the horse, opium has the same action as belladonna.

Dr. LaBaw cited a case he had seen in Springfield with Dr. Osgood, who had given a grain-and-a-half of morphine and three-quarters-of-a-grain of atropine in two doses. When he (Dr. LaBaw) arrived, some time later, he found the horse pressing his head against the wall with dilated pupils.

Dr. Osgood believed that in aconite, small doses repeated, are better than large ones. After some further discussion, Dr. Winchester moved than a vote of thanks be given the essayist. Seconded by Dr. Winslow and carried unanimously,

Dr. Bryden then read an interesting paper on "Quittor." In the discussion which followed, Dr. Bryden said that the average time he allowed for a true quittor to heal was seven months.

Dr. Marshal said that when he was with the street railroad

company he had had a great number of cases of quittor. These cases were treated with sulphate of copper injections and poultices; he had not found it necessary to treat any horse for seven months. They had uaually good results.

Dr. Bryden said it was not fair to take a number of cases and bunch them; the history, in each case, should be considered separately. Where tissue changes have gone on, it was impossible for them to heal in a few weeks.

Dr. Howard asked the essayist, if he keeps the horse at work or if he poultices and lays still.

Dr. Bryden said that where the horse is not lame he poultices and works.

Dr. Sherman said his treatment consists in paring away all the horn in the neighborhood of the sore; he puts shoe on and does not touch the sinus. Whenever he has probed and injected he has had more trouble. He simply keeps the hoof away from the shoe and the case gets well.

Dr. Bryden explained that he considered true quittor to be where there was a condition of hoof where the tissues are confined and degenerated, not so far as necrosis, but a certain amount of degeneration has gone on and the circulation is dammed back. Then when by the removal of horn and softening of the foot by poultices, the obstruction to the circulation is removed, the tissues spring back into life again. If a bird's plumage is removed it is impossible to make them grow in a day or two. In the same way, if a foot is confined, and the coronet tight, the tissues below are interfered with, a process of degeneration goes on, cartilaginous changes set in, and the cartilage becomes hypertrophied. He thought the pathological changes in the foot ought to be thoroughly studied.

Dr. Winchester referred to a paper read at the meeting in Chicago, where the fistulæ was due, not to external violence, but to external causes; he thought that is what takes place in the form of quittor referred to by Dr. Bryden. He referred to a case of sidebones he had treated on Dr. Bryden's theory with excellent results.

Dr. Howard remarked that they all admitted that quittor could arise as Dr. Bryden described; some of those present seemed to think that it was only one form of quittor; according to Dr. Bryden it is a matter of faulty diagnosis.

After some further discussion, the meeting adjourned with a hearty vote of thanks to the essayist.

JOHN M. PARKER, *Seeretary.*

CALIFORNIA STATE VETERINARY MEDICAL ASSOCIATION.

SAN FRANCISCO, CAL., March 14, 1894.

On the above date the California State Veterinary Medical Association held its regular quarterly meeting at the Baldwin Hotel, San Francisco, Cal., at 7:30 P. M.

The meeting was called to order by the President, Dr. H. A. Spencer.

Owing to the absence of the Secretary, Dr. D. F. Fox was appointed secretary *pro tem.*

Upon roll-call the following named gentlemen answered to their names: Drs. Maclay, Spencer, Sr., Spencer, Jr., Wadas, Orvis, Pierce, Robin, Williams, Forrest, Jackson, Hogarty, Eddy and Fox; visitor, I. B. Dalziel.

On motion by Dr. Maclay the reading of the minutes of the previous meeting was dispensed with, and they were adopted.

The President then delivered his inaugural address, which was very highly appreciated by the members present.

Under the head of reading of papers, discussions, etc., Dr. H. F. Spencer read a very interesting and instructive paper on "Purpura Haemorrhagica." The discussion was opened by Dr. Maclay. He highly recommended the use of cold applications to the swellings; he said there was no similarity between the subject under consideration and lymphangitis. The subject was further discussed by Drs. Orvis and Forrest.

Dr. Pierce was then called upon to entertain the meeting with a paper, which he did by reading an essay on Parturient Apoplexy.

The discussion was opened by Dr. Wadams, who recom-

mended for treatment croton oil and stimulants. Dr. Spencer, Jr., also recommended stimulants. Dr. Orvis suggested that different treatments should be given to different veterinarians, and let them try them and report to the association. His idea of treatment is hyposulphite of soda and injections of stimulants, as alcohol, nux vomica, etc. Dr. Jackson has been very successful with the use of nux vomica and belladonna, followed two days after by purgatives and enemas. Dr. Pierce said he had used sulphate of eserine with success. Dr. Forrest also favored the use of stimulants.

Dr. Maclay spoke on the pathology of the disease; he thought the vascular system should receive more notice than the nervous system. Dr. Spencer, Jr., was of the opinion that the disease was not an apoplexy. Dr. Maclay said he heartily agreed with Dr. Spencer.

There was considerable more discussion on this point, which all tended to show that all of the members had reached the conclusion that the term apoplexy was nothing more than an "asylum ignorante."

The President then closed the discussion with a few well-chosen remarks.

As Dr. Archibald was not present his paper was read by Dr. Fox, the subject being, The Sympathetic Nerve System; or, Why Orificial Surgery should Cure or Affect Most Chronic Diseases, explained from an Anatomical and Physiological Basis. The paper was well received, and was discussed by most of the members present.

The President, in closing the discussion, mentioned a number of cases where he had seen good results from the application of orificial surgery in the human family.

Under the head of new business, Dr. Maclay moved that a vote of thanks be extended to the essayists for the able and masterly manner in wnich they had entertained the meeting; the motion was seconded by Dr. Orvis, and was carried.

On motion by Dr. Maclay the Secretary was instructed to forward the result of the meeting to the veterinary journals.

On motion by Dr. Maclay a vote of thanks was extended to Drs. Archibald and Fox for the manner in which they had entertained the members at the last annual meeting in Sacramento.

The subject matter of the lost certificates was brought up and discussed, whereupon, on motion by Dr. Maclay, the President was requested to appoint a committee to look into the matter. The President appointed Drs. Orvis and Robin. Dr. Orvis requested that Dr. Spencer, Jr., be substituted in his place, as it was impossible for him to attend to the matter; there being no objections it was so ordered.

Dr. Maclay then spoke at some length on the good of the association, also on legislative matters.

Dr. Fox moved that the President appoint a committee of five on legislative matters, and that the committee be empowered to represent the association at the meeting of the State Sanitary Convention in San Jose next month; also that the President appoint himself as one of the committee. The motion was seconded by Dr. Pierce, and carried.

The President then appointed the following gentlemen on the Legislative Committee, viz.: Drs. Maclay, Spencer, Sr., Archibald, Orvis and Skaife.

The President then appointed the following-named gentlemen as essayists for the next meeting, viz.: Drs. Fox, Eddy and Forrest.

There being no further business before the meeting it adjourned to meet in San Francisco June 13th, 1894.

R. A. ARCHIBALD, *Secretary.*

VIRGINIA STATE VETERINARY MEDICAL ASSOCIATION.

RICHMOND, VA., March 22, '94

The first regular meeting of the Virginia State Veterinary Medical Association was held at the Y. M. C. A. Hall, Richmond, Va., March 22d.

This society was incorporated by the Legislature with all the powers of a corporate body, having for its object fraternal fellowship of its members, and mutual protection and advance-

ment in the practice of veterinary medicine and surgery. Only graduates of reputable veterinary and medical schools are eligible to membership.

The following officers were elected for one year: W. H. Harbaugh, V.S., President; E. P. Niles, D.V.M., First Vice-president; J. H. Adamson, M.D.C., Second Vice-president; A. W. Swedberg, V,S., Secretary; T. A. Donaldson, V,S., Treasurer; Board of Censors—Jos. T. Bushman, M.R.C.V.S., C. P. Dixon, D.V.S., Wm. Gilchrist, V.S., H. Bannister, D.V.M., Geo. C. Faville, D.V.M.

After appointing several committees and transacting business, the society adjourned to meet Aug. 15, '94. at Norfolk.

A. W. Swedberg, V.S.,
Secretary, V. S. V. M. A.

ILLINOIS STATE VETERINARY MEDICAL ASSOCIATION.*

LELAND HOTEL, Springfield, Ill., Feb. 21, 1894.

The semi-annual meeting was called to order by the President, Dr. John Scott. The roll being called the following members responded to their names: Drs. S. S. Baker, G. W. Browning, G. L. Crocker, C. D. Hartman, J. W. Ireland, J. T. Nattress, T. B. Newby, Jno. Scott, and M. Wilson.

The minutes of the last regular meeting were read and approved.

The amendment to Article IV. of the By-laws as proposed at last meeting by Dr. S. S. Baker, to the effect that no member shall be eligible to vote except his dues be paid in full to date, was adopted.

The motion was made by Dr. Wilson, seconded by Dr. S. S. Baker, that the rules be suspended for the time being and applications for membership received. Carried.

The names of Dr. A. Babb, "Ch. '93," Springfield, Ill., and Dr. W. T. Gwinn, "Ch. '93," Newman, Ills., were proposed by Dr. S. S. Baker. They were elected to membership by accalmation.

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* The papers read at this meeting will appear in our next issue.

J. A. McDonnell, M.D., of Chicago, was then called on for some remarks on experiments made with permanganate of potash as an antidote for morphine poisoning.

Meeting adjourned until 2 P.M.

Upon reconvening the president called on Dr. T. B. Newby for his paper on "Dentition Diseases." After a lengthy discussion and the exhibiting of several specimens the discussion of the paper was closed.

Dr. J. W. Ireland was then called on for his paper on "Acute Indigestion," and followed by Dr. Browning in his paper on "Castration of Cryptorchids."

Dr. J. T. Nattress then read his paper on "Fistulous Withers" and was followed by Dr. Babb on "Inflammation."

Bills to the amount of $35.25 were audited and ordered paid. Motion was made by Dr. S. S. Baker, seconded by Dr. Wilson that Dr. Bower Talbot be dropped from membership roll for not conforming to the rules and regulations of the association. Carried.

A vote of thanks was extended the essayists and also the proprietors of the hotel for their accommodations.

The meeting adjourned until the next regular meeting in November.

NEWS.

AN OFFICIAL LETTER RELATING TO TUBERCULOSIS.

LAWRENCE, MASS., December 26, 1893.

To the Honorable Mayor and Board of Alderman:

GENTLEMEN.—As inspector of cattle for the city I hereby submit to you the report of my work for 1893.

I have examined two hundred and forty head of cattle, and of that number eight have been killed, and the post-mortem examinations have sustained the opinion given.

One animal killed was bought by a citizen of this city from an inspector in a neighboring town, and then sold to a third party, in whose possession it was found. The autopsy of this

animal showed marked lesions of the lungs and pleura due to the tubercle bacilli. Two others that were killed came from an adjourning town, and were intended for slaughter. One of these was so weak and emaciated that it fell in the highway, unable to rise, and the other, although with more strength, was extensively diseased.

At present there are three cows under restrictions, placed there by the Cattle Commission, and it is a question of time as to what disposition will be made of them.

There was one animal adjudged souud by one member of the Cattle Commission killed, which, upon post-mortem examination, revealed changes due to tubercle bacilli in the form of miliary tubercles in the udder,

Owing to the fact that the Cattle Commission, as a rule, condemn cattle in the advanced stages of tuberculosis, which the chairman told me was their method, there is very likely to be a difference of opinion as to its existence. This should be settled by subjecting the animal to the acknowledged test for that malady, for the law does not specify in what stage the disease shall exist. As a matter of fact it is impossible for any one to diagnose tuberculosis in certain stages, or organs of the body by a physieal examination, but with the aid of tuberculin that difficulty is removed.

In regard to the examination of the cattle of the neighboring towns that supply the city with milk, it has been found that some of the cattle, at least, have not been inspected. Some farmers who bring milk to this market are not aware that every town in this state has an inspector of cattle appointed especially to examine all cattle for tuberculosis.

The question of tuberculosis is, without doubt, *the* one that is of most importance to the welfare of the human family, since this disease causes more deaths than any other one, with the exception of cholera infantum, and even this is often due to the tubercle bacilli. The time has passed when there need be any argument as regards the danger to human life from the use of milk from tuberculous cows.

In this city for the year 1892 there were over 91 deaths from tuberculosis, or 7.2 per cent., while typhoid fever for the same year claimed 48, or 3.8 per cent. (Board of Health Report for 1892.) From January 1 to December 1, 1893, there were 93 deaths from tuberculosis, or 7.9 per cent. of the total number. (Report from Board of Health.)

It is acknowledged by the scientific world that tuberculosis is a contagious disease, and when the board of health will accept this fact and treat it accordingly there ought certainly to be a reduction in the death rate.

It is impossibly to state positively how many die from the effects of tuberculous milk, but, knowing what effect that milk has, the action of the legislature, requiring an inspection of dairy cattle, was certainly a step in the right direction.

Respectfully submitted,

J. F. WINCHESTER, B.Sc., D.V.S., Inspector.

NOTICE.

UNITED STATES VETERINARY MEDICAL ASSOCIATION.

Additional copies of the proceedings of the United States Veterinary Medical Association for 1891 and 1892 having been secured by the officers, the same may be obtained at the secretary's office for the cost price of $2 per cloth bound and $1.75 per paper copy.

Subscription membership is still open at $2 for the proceedings of the thirtieth annual meeting and the first International Congress.

T. J. TURNER, *Secretary*, Columbia, Me.

VETERINARY LEGISLATION.

LAW GOVERNING THE PRACTICE OF VETERINARY MEDICINE AND SURGERY IN VIRGINIA.

CHAPTER 1. *Section 1.* Be it enacted by the General Assembly of Virginia, that, it shall be unlawful for any one except a regularly authorized veterinarian to engage in the practice of veterinary medicine or surgery, unless such person is a

graduate in veterinary medicine and surgery and has received a diploma subscribed by the faculty of a regularly incorporated veterinary university or college, chartered under the authority of some one of the United States, or of a foreign government recognized by the United States.

Sec. 2. No person shall engage tn the practice of veterinary medicine or surgery without being legally registered, as hereinafter required.

Sec. 3. Applicants for registration must present diploma for recordation in the clerk's office of county or corporation court of county or corporation in which he resides, if he resides in the city of Richmond, in the clerk's office of the chancery court of said city.

Sec. 4. All persons holding diplomas issued by incorporated veterinary universities or colleges having a governing faculty containing four or more veterinarians are eligible for registration, and such diplomas shall be recorded by the clerk of said court in a book to be kept for that purpose, and indexed in the name of the person to whom such diploma has been granted. All persons who have been engaged in the practice of veterinary medicine and surgery for ten years prior to January 1, 1893, not holding diplomas, shall present their names with satisfactory vouchers to clerk of court. Where upon such evidence their names and vouchers shall be recorded as aforesaid. The clerk's fee for recording shall be the same as for recording a deed.

Sec. 5. No person who shall have commenced the practice of veterinary medicine or surgery since January 1, 1893, or who shall hereafter commence the practice of the same, shall ask, demand, or receive compensation for such service unless duly registered according to provisions of Section 4. Any person violating the provisions of this section shall be guilty of a misdemeanor, and shall be fined not less than fifty nor more than five hundred dollars for each offense.

Sec. 6. Nothing in this chapter shall be taken as including or affecting in any way the practice of the operations known as gelding, emasculation, spaying, or castration, as practiced upon domestic animals. Nor shall it include veterinarians residing in other states when called into consultation with resident practitioners of this state.

Sec. 7. Any person failing to comply with the requirements of this Act within three months from its passage must present diploma for recordation as set forth in Section 4.

Sec. 8. This Act shall take effect immediately upon its passage.

PRACTICE FOR SALE.

SULLIVAN, ILL., January 5, 1894.

Editor AMERICAN VETERINARY REVIEW:

I have a new hospital, well epuipped and well furnished, which I want to sell cheap and on easy terms. There is no competition in the county, and it is located at the county seat, with 3,000 inhabitants. My hospital is a good one, and was built expressly for the purpose, and I have a good practice. My reasons for offering it for sale is on account of my health.

J. L. BONE, D.V.S.

CORRESPONDENCE.

RECOVERY OF CHAMPIGNON IN THE HORSE.

HAVERHILL, MASS., Feb, 19, 1894.

To the Editor of the American Veterinary Review:

In the February number of your journal, I notice a report of a case of "Champignon of a Horse," treated with potassium iodide, with seemingly successful results.

Sometime last spring I had a somewhat similar case. Three months or more after castration, the left cord was much enlarged and swollen. I cast the colt with the intention of operating. After casting and examining, however, the enlarged cord was found to be extending into the abdominal cavity, and in such a condition that operation was not thought advisable.

Later, with Dr. Winchester, of Lawrence, we decided to wait and watch progress.

Some four weeks later, the colt was turned out to pasture, where the swollen cord gradually became smaller, and in three months the swelling had entirely disappeared.

Had this colt been treated with potassium iodide, the drug would have got the whole credit, instead of Mother Nature.

Yours truly,

JOHN M. PARKER.